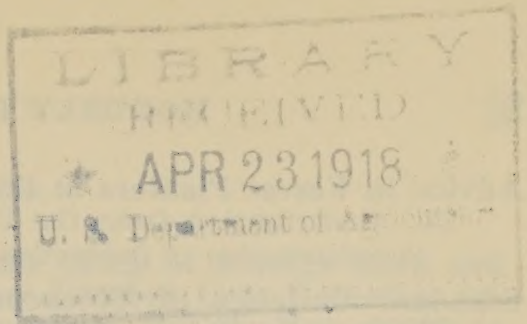


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
United States Department of Agriculture,

WASHINGTON, D. C., *January 31, 1918.*

MONTHLY LIST OF PUBLICATIONS.


[JANUARY, 1917.]

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SPECIAL NOTICE.

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

 NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

Cranberry Insect Problems and Suggestions for Solving Them. By H. B. Scammell, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 45, figs. 37. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 860.**)

Supersedes Farmers' Bulletin 178, and is of interest to all cranberry growers.

Irrigation of Alfalfa. By Samuel Fortier, Chief, Irrigation Investigations. Pp. 40, figs. 36. Contribution from the Office of Public Roads and Rural Engineering. (**Farmers' Bulletin 865.**)

A revision of Farmers' Bulletin 373, and is of interest to Alfalfa growers generally.

Making Butter on the Farm. By William White, Dairy Division. Pp. 23, figs. 18. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 876.**)

Supersedes Farmers' Bulletin 541, and is for general distribution.

Advice to Forest Planters in the Plains Region. By Seward D. Smith. Pp. 23. Contribution from the Forest Service. (**Farmers' Bulletin 888.**)

For distribution in the section known as the Great Plains Region.

Standard Varieties of Chickens. II. The Mediterranean and Continental Classes. By Rob R. Slocum, Animal Husbandry Division. Pp. 26, figs. 22. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 898.**)

Describes the Leghorn, Minorca, Whitefaced Black Spanish, Blue Andalusian, Ancona, and Campine breeds of chickens.

Fire Prevention and Fire Fighting on the Farm. By H. R. Tolley, Scientific Assistant, and A. P. Yerkes, Assistant Agriculturist. Pp. 16, fig. 1. Contribution from the Office of Farm Management. (**Farmers' Bulletin 904.**)

For general distribution.

A Successful Community Drying Plant. By C. W. Pugsley, Director of Agricultural Extension, University of Nebraska. Pp. 12, figs. 9. (**Farmers' Bulletin 916.**)

Suitable for general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises of bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Mediterranean Fruit Fly in Hawaii. By E. A. Back, Entomologist, and C. E. Pemberton, Assistant Entomologist, Mediterranean and Other Fruit-Fly Investigations. Pp. 119, pls. 21, figs. 24. Contribution from the Bureau of Entomology. (Professional Paper.) Jan. 26, 1918. (**Department Bulletin 536.**) Price, 30 cents.

A study of the life history and distribution of this insect, with suggested methods for its control. No copies available for distribution by the department.

The Pecan Leaf Case-Bearer. By John B. Gill, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 28, pls. 3. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 15, 1917. (**Department Bulletin 571.**) Price, 5 cents.

Describes the life history and habits of the insect, and suggests means for its control.

Farm Management and Farm Profits on Irrigated Land in the Provo Area (Utah Lake Valley.) By L. G. Connor, Assistant Agriculturist. Pp. 40, pls. 4. Contribution from the Office of Farm Management. Jan. 7, 1918. (**Department Bulletin 582.**) Price, 10 cents.

Of interest to prospective settlers in the region named.

The 28-Hour Law Regulating the Interstate Transportation of Live Stock: Its Purpose, Requirements, and Enforcement. By Harry Goding and A. Joseph Raub, Bureau of Animal Industry. Pp. 20, pls. 5, figs. 6. Contribution from the Bureau of Animal Industry. Jan. 5, 1918. (**Department Bulletin 589.**) Price, 10 cents.

Of interest to shippers of live stock.

A Method of Calculating Economical Balanced Rations. By J. C. Rundles, Scientific Assistant. Pp. 19. Contribution from the Office of Farm Management. Jan. 14, 1918. (**Department Bulletin 637.**) Price, 5 cents.

Of interest to raisers and feeders of live stock.

Lint Percentage and Lint Index of Cotton and Methods of Determination. By G. S. Meloy, Assistant, Crop Acclimatization and Cotton Breeding. Pp. 12, figs. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) Jan. 18, 1918. (**Department Bulletin 644.**) Price, 5 cents.

Of interest to cotton planters and breeders.

Some Reasons for Spraying to Control Insect and Mite Enemies of Citrus Trees in Florida. By W. W. Yothers, Entomological Assistant, Tropical and Subtropical Fruit Insect Investigations. Pp. 19. Contribution from the Bureau of Entomology. Jan. 26, 1918. (**Department Bulletin 645.**) Price, 5 cents.

Of especial interest to citrus fruit growers in Florida.

MISCELLANEOUS.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period from October 1, to December 31, 1914. Pp. 67, pls. 4. Dec. 29, 1917. (Inventory No. 41; Nos. 39309 to 39681. Bureau of Plant Industry.) Price, 10 cents.

The Agricultural Situation for 1918. Part I, Hogs. Hog Production Should be Increased. Pp. 24, figs. 2. January, 1918. (Circular 84, Office of the Secretary.) Price, 5 cents.

The first of a series of statements regarding the necessity for increased production of food products in 1918.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 11, No. 13. Dec. 24, 1917. Contents: Structure of the Pod and the Seed of the Georgia Velvet Bean, *Stizolobium deeringianum*. (lg G-130) By Charles V. Piper and J. Marion Shull.—Decomposition of Green and Stable Manures in Soil. (li Iowa-5) By R. S. Potter and R. S. Snyder.—*Eupatorium urticaefolium* as a Poisonous Plant. (lh A-33) By C. Dwight Marsh and A. B. Clawson. Pp. 673-715, pls. 6, figs. 9. Price, 20 cents.

Same, Vol. 12, No. 1. Jan. 7, 1918. Contents: Effect of Time of Digestion on the Hydrolysis of Casein in the Presence of Starch. (ll Ky.-6) By J. S. McHargue.—Behavior of Sweet Potatoes in the Ground. (ln G-131) By Heinrich Hasselbring.—Studies in Soil Reaction as Indicated by the Hydrogen Electrode. (lo N. C.-7) By J. K. Plummer. Pp. 31, fig. 1. Price, 10 cents.

Same, Vol. 12, No. 2. Jan. 14, 1918. Contents: Pure Cultures of Wood-Rotting Fungi on Artificial Media. (lp G-132) By W. H. Long and R. M. Harsch.—Gossypol, the Toxic Substance in Cottonseed. (lm N. C.-8) By W. A. Withers and Frank E. Carruth.—Fruit-Fly Parasitism in Hawaii During 1916. (ls K-59.) By C. E. Pemberton and H. F. Willard. Pp. 33-108, pl. 1, figs. 3. Price, 20 cents.

Same, Vol. 12, No. 3. Jan. 21, 1918. Contents: Irrigation Experiments on Apple-Spot Diseases. (lv G-133) By Charles Brooks and D. F. Fisher.—Relation of Carbon Dioxid to Soil Reaction as Measured by the Hydrogen Electrode. (lq Cal.-13.) By D. R. Hoagland and L. T. Sharp. Pp. 109-148, pls. 4, figs. 10. Price, 15 cents.

Same, Vol. 12, No. 4. Jan. 28, 1918. Contents: A Study of the Plow Bottom and Its Action Upon the Furrow Slice. (lt N. Y. (Cornell)-3.) By E. A. White.—Influence of Nitrates on Nitrogen-Assimilating Bacteria. (lr Wis.-10.) By T. L. Hills. Pp. 149-230, pls. 4, figs. 26. Price, 25 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 37, No. 7, November, 1917. E. W. Allen, Ph. D., Editor. Pp. 601-700. Price, 15 cents.

Same, Vol. 37, No. 8, December, 1918. Pp. 701-800. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 4, No. 1, January, 1918. Pp. 1-8. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals, especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 127, November, 1917. Pp. 117-127. Jan. 24, 1918. Price, 5 cents.

Bureau of Chemistry. Supplement 31. [N. J. 5001-5050.] Pp. 1-58. Jan. 28, 1918. Price, 10 cents.

Bureau of Chemistry. Supplement 32. [N. J. 5051-5100.] Pp. 59-121. Jan. 29, 1918. Price, 10 cents.

Federal Horticultural Board. No. 46. November, 1917. Pp. 135-142. Jan. 7, 1918. Price, 5 cents.

Bureau of Markets. No. 30. Pp. 9. Jan. 23, 1918. Price, 5 cents.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of the San Fernando Valley Area, California. By L. C. Holmes, E. C. Eckmann, and G. L. Harrington, of the U. S. Department of Agriculture, and J. E. Guernsey and C. J. Zinn, of the University of California. Pp. 61, pls. 4, figs. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Howard County, Maryland. By William T. Carter, Jr., of the U. S. Department of Agriculture, and J. P. D. Hull, of the Maryland Geological Survey. Pp. 34, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Kimball County, Nebraska. By A. H. Meyer, J. O. Veatch, and B. W. Tillman, of the U. S. Department of Agriculture, and F. A. Hayes, H. C. Mortlock, and C. E. Collett, of the Nebraska Soil Survey. Pp. 28, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Kay County, Oklahoma. By N. M. Kirk and R. C. Journey. Pp. 40, pl. 1, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 10. October, 1917. [Dec. 31, 1917.] Pp. 481-528, charts 9, figs. 13. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Atmospheric optical disturbances, Fall of 1911 to February, 1917. By C. Dorno.—Transparency of the atmosphere for ultra-violet radiation. By R. J. Strutt.—A. Brester's theory of the sun.—Lunar rainbow. By H. A. French.—Halos of October 3, 1917, in Texas and Ohio.—Notes on the climate of France and Belgium. By P. C. Day.—Fog along the California Coast. By A. H. Palmer.—Glaze, "Glazed Roads", "Ammil".—Great thunderstorm of Aug. 1, 1917, in Trinity County, Cal. By James Jones.—Heaviest rainfall in the British Isles.—Tropical hurricane of September 27-28, 1917, in southeastern Louisiana. By Ray A. Dyke.

National Weather and Crop Bulletin, No. 1, January, 1918; reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

Snow and Ice Bulletins for January 2, 8, 15, 22, 29, 1918. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,
Chief, Division of Publications.

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., *February 28, 1917.*

MONTHLY LIST OF PUBLICATIONS.

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Goose Raising. By Harry M. Lamon and Alfred R. Lee, of the Animal Husbandry Division. Pp. 16, figs. 8. Contribution from the Bureau of Animal Industry. February, 1917. (Farmers' Bulletin 767.)

For general distribution.

Feeding and Management of Dairy Calves and Young Dairy Stock. By W. K. Brainerd and H. P. Davis, Dairy Division. Pp. 19, figs. 5. Contribution from the Bureau of Animal Industry. February, 1917. (Farmers' Bulletin 777.)

Of especial interest to those engaged in the dairy business.

Powder-Post Damage by Lyctus Beetles to Seasoned Hardwood. By A. D. Hopkins, Forest Entomologist, and T. E. Snyder, Specialist in Forest Entomology. Pp. 20, figs. 13. Contribution from the Bureau of Entomology. January, 1917. (Farmers' Bulletin 778.)

Systems of control which adapt certain features in business management to the habits and seasonal history of Lyctus powder-post beetles have been perfected by the Bureau of Entomology and have been adopted by many manufacturers and dealers in seasoned hardwood products, and there has been a marked decrease in powder-post losses since 1906. The object of this bulletin is to describe the methods which have been found effective in preventing these losses and to induce a more general adoption of them throughout the United States, as well as to show the character and extent of the damage.

How to Select a Sound Horse. By H. H. Reese, Animal Husbandman, Animal Husbandry Division. Pp. 27, figs. 36. Contribution from the Bureau of Animal Industry. February, 1917. (Farmers' Bulletin 779.)

Suitable for general distribution.

Tuberculosis of Hogs. By John R. Mohler, Assistant Chief, Bureau of Animal Industry, and Henry J. Washburn, Senior Bacteriologist, Pathological Division. Pp. 20, figs. 3. Contribution from the Bureau of Animal Industry. February, 1917. (*Farmers' Bulletin* 781.)

Is a revision of Bureau of Animal Industry Circular 201, and is intended to assist hog-raisers in exterminating a dangerous disease.

Anthrax or Charbon. By Henry J. Washburn, Senior Bacteriologist, Pathological Division. Pp. 16. Contribution from the Bureau of Animal Industry. February, 1917. (*Farmers' Bulletin* 784.)

Supersedes *Farmers' Bulletin* 439 on the same subject, and is intended to give valuable information to all who have anything to do with domestic animals.

Seed-Flax Production. By Charles H. Clark, Assistant Agronomist in charge of Flax Investigations. Pp. 19, figs. 9. Contribution from the Bureau of Plant Industry. February, 1917. (*Farmers' Bulletin* 785.)

Suitable for distribution in the Dakotas, Minnesota, and Montana.

Fall-Sown Grains in Maryland and Virginia. By T. R. Stanton, Scientific Assistant, Office of Cereal Investigations. Pp. 23, figs. 5. Contribution from the Bureau of Plant Industry. February, 1917. (*Farmers' Bulletin* 786.)

Suitable for distribution in Delaware, Maryland, Virginia, and West Virginia.

Mushroom Pests and How to Control Them. By C. H. Popenoe, Entomological Assistant, Truck Crop and Stored Product Insect Investigations. Pp. 16, figs. 6. Contribution from the Bureau of Entomology. February, 1917. (*Farmers' Bulletin* 789.)

Of interest to growers of mushrooms.

Citrus-Fruit Improvement. How to Secure and Use Tree-Performance Records. By A. D. Shamel, Physiologist in Charge of Fruit-Improvement Investigations, Office of Horticultural and Pomological Investigations. Pp. 16, figs. 4. Contribution from the Bureau of Plant Industry. February, 1917. (*Farmers' Bulletin* 794.)

Of interest to all citrus-fruit growers.

DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Public-Road Mileage and Revenues in the Southern States, 1914. Prepared jointly by the Division of Road Economics of the Office of Public Roads and Rural Engineering, and State Collaborators. Pp. 123. Contribution from the Office of Public Roads and Rural Engineering. Feb. 20, 1917. (*Department Bulletin* 387.) Price, 15 cents.

A compilation showing roads, mileage of improved and unimproved roads, sources and amounts of road revenues, bonds issued and outstanding, and a description of the systems and other factors affecting road improvement in each State.

Western Yellow Pine in Oregon. By Thornton T. Munger, Forest Examiner. Pp. 48, pls. 7. Contribution from the Forest Service. (Professional Paper.) Feb. 6, 1917. (*Department Bulletin* 418.) Price, 15 cents.

A technical description of this species of pine, with methods of logging, planting, utilization, and reproduction.

The Potato Tuber Moth. By J. E. Graf, Entomological Assistant, Truck Crop and Stored Product Insect Investigations. Pp. 56, figs. 45, map. Contribution from the Bureau of Entomology. (Professional Paper.) Feb. 6, 1917. (*Department Bulletin* 427.) Price, 15 cents.

Is of interest to entomologists and to potato growers, especially in the warmer sections of the country.

Life History of the Codling Moth in the Pecos Valley, N. Mex. By A. L. Quaintance, Entomologist in Charge of Deciduous Fruit Insect Investigations, and E. W. Geyer, Scientific Assistant. Pp. 90, figs. 17. Contribution from the Bureau of Entomology. (Professional Paper.) Feb. 28, 1917. (*Department Bulletin* 429.) Price, 15 cents.

A technical description of the habits of this insect, and of interest to entomologists generally.

Sacbrood. By G. F. White, Expert, Engaged in the Investigation of Bee Diseases. Pp. 55, pls. 4, figs. 33. Contribution from the Bureau of Entomology. (Professional Paper.) Feb. 9, 1917. (Department Bulletin 431.) Price, 10 cents.

Of interest to beekeepers generally.

Changes in Fresh Beef During Cold Storage Above Freezing. By Ralph Hoagland, Charles N. McBryde, and Wilmer C. Powick, of the Biochemic Division. Pp. 100, figs. 2. Contribution from the Bureau of Animal Industry. (Professional Paper.) Feb. 15, 1917. (Department Bulletin 433.) Price, 10 cents.

A study of the commercial practices in the cold storage of fresh beef and the effects of same upon the meat, and is of interest to butchers and meat packers generally.

The Desert Corn Flea-Beetle. By V. L. Wildermuth, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 23, figs. 7. Contribution from the Bureau of Entomology. (Professional Paper.) Feb. 7, 1917. (Department Bulletin 436.) Price, 5 cents.

A study of the habits, life history, and methods of controlling this insect, and of especial interest to farmers in the southern parts of California, Arizona, and New Mexico.

The Navel Orange of Bahia, With Notes on Some Little-Known Brazilian Fruits. By P. H. Dorsett, A. D. Shamel, and Wilson Popenoe, Agricultural Explorers, Office of Foreign Seed and Plant Introduction. Pp. 35, pls. 24, fig. 1. Contribution from the Bureau of Plant Industry. Feb. 10, 1917. (Department Bulletin 445.) Price, 20 cents.

Of interest to growers and shippers of tropical fruits.

Separation and Identification of Food-Coloring Substances. By W. E. Mathewson, Assistant Chemist. Pp. 56. Contribution from the Bureau of Chemistry. (Professional Paper.) Feb. 15, 1917. (Department Bulletin 448.) Price, 10 cents.

This bulletin will be of interest chiefly to chemists engaged in food analysis.

Marketing Creamery Butter. By Roy C. Potts, Specialist in Marketing Dairy Products, and H. F. Meyer, Assistant in Marketing Dairy Products. Pp. 38, figs. 17. Contribution from the Office of Markets and Rural Organization. Feb. 5, 1917. (Department Bulletin 456.) Price, 10 cents.

Should be of special interest to manufacturers and distributors of creamery butter in the United States and of general interest to dairy farmers who sell cream to creameries.

Irrigation in Florida. By F. W. Stanley, Irrigation Engineer. Pp. 62, pls. 6, figs. 10. Contribution from the Office of Public Roads and Rural Engineering. Feb. 16, 1917. (Department Bulletin 462.) Price, 15 cents.

A study of the need of, and systems of, irrigation in Florida. Of interest to truck and fruit growers in Florida.

Earth, Sand-Clay, and Gravel Roads. By Charles H. Moorefield, Senior Highway Engineer. Pp. 68, pls. 5, figs. 24. Contribution from the Office of Public Roads and Rural Engineering. Feb. 21, 1917. (Department Bulletin 463.) Price, 15 cents.

Describes methods of building and maintenance; also contains typical specifications for such roads.

Propagation of Wild-Duck Foods. By W. L. McAtee, Assistant Biologist. Pp. 40, figs. 35. Contribution from the Bureau of Biological Survey. Feb. 23, 1917. (Department Bulletin 465.) Price, 10 cents.

Is for general distribution among persons and organizations interested in the protection, preservation, and propagation of waterfowl. It supersedes Biological Survey Circular No. 81, dealing with wild rice, wild celery, and pondweeds; and Department Bulletin No. 58, dealing with delta potato, wapato, chufa, wild millet, and banana waterlily.

Production of Sugar in the United States and Foreign Countries. By Perry Elliott, Division of Crop Records. Pp. 70. Contribution from the Bureau of Crop Estimates. Feb. 12, 1917. (Department Bulletin 473.) Price, 10 cents.

A concise account of the sugar production of the United States and of practically all foreign countries. It is intended for general circulation.

True Mahogany. By C. D. Mell, Forest Examiner. Pp. 24, pls. 3, figs. 4. Contribution from the Forest Service. (Professional Paper.) Feb. 9, 1917. (Department Bulletin 474.) Price, 5 cents.

A technical description of this wood, with a statement showing supply, uses, and methods of logging.

Farming in the Bluegrass Region. By J. H. Arnold, Agriculturist, and Frank Montgomery, Scientific Assistant. Pp. 29, figs. 13. Contribution from the Office of Farm Management, Office of the Secretary. Feb. 19, 1917. (Department Bulletin 482.) Price, 5 cents.

A study of the organization and management of 178 farms in Central Kentucky.

Statistics of Fruits in Principal Countries; Production, Exports, and Imports for the United States and Foreign Countries. By H. D. Ruddiman, Division of Crop Records. Pp. 40. Contribution from the Crop Estimates. Feb. 14, 1917. (Department Bulletin 483.) Price, 5 cents.

Contains a brief survey of the fruit industry in principal countries. While intended for general distribution to the public, it is of especial interest to fruit growers and dealers.

Experiments in the Disposal of Irrigated Crops Through the Use of Hogs. By James A. Holden, Assistant, Office of Western Irrigation Agriculture. In cooperation with the Bureau of Animal Industry. Pp. 27, figs. 3. Contribution from the Bureau of Plant Industry and the Bureau of Animal Industry. Feb. 26, 1917. (Department Bulletin 488.) Price, 5 cents.

Of interest to irrigation farmers generally.

An Economic Study of Farming in Sumter County, Ga. By H. M. Dixon, Assistant Agriculturist, and H. W. Hawthorne, Scientific Assistant. Pp. 64, figs. 6. Contribution from the Office of Farm Management, Office of the Secretary. (Professional Paper.) Feb. 10, 1917. (Department Bulletin 492.) Price, 10 cents.

A report on an exhaustive study of farming in a representative county in the cotton belt and is of interest to cotton growers especially.

Spray Irrigation. By Milo B. Williams, Irrigation Engineer. Pp. 40, figs. 19. Contribution from the Office of Public Roads and Rural Engineering. Feb. 14, 1917. (Department Bulletin 495.) Price, 10 cents.

Of special interest to truck and small-fruit growers of the eastern part of the United States.

Investigations of the Rotting of Slash in Arkansas. By W. H. Long, Forest Pathologist, Office of Investigations in Forest Pathology. Pp. 15. Contribution from the Bureau of Plant Industry. (Professional Paper.) Feb. 16, 1917. (Department Bulletin 496.) Price, 5 cents.

A study of the methods of brush disposal in Arkansas and of especial interest to lumbermen.

Experiments With Spring Cereals at the Eastern Oregon Dry-Farming Substation, Moro, Oregon. By David E. Stephens, Station Superintendent, Office of Cereal Investigations. Pp. 38, figs. 15. Contribution from the Bureau of Plant Industry. Feb. 19, 1917. (Department Bulletin 498.) Price, 10 cents.

Of especial interest to farmers in the Columbia River Basin.

The Mulched-Basin System of Irrigated Citrus Culture and Its Bearing on the Control of Mottle-Leaf. By Lyman J. Briggs, Biophysicist in Charge, C. A. Jensen, Assistant in Plant Malnutrition Investigations, and J. W. McLane, Laboratory Assistant, Office of Biophysical Investigations. Pp. 31, pl. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) Feb. 12, 1917. (Department Bulletin 499.) Price, 10 cents.

Of interest to citrus-fruit growers, especially in California.

A Study in the Cost of Producing Milk on Four Dairy Farms, Located in Wisconsin, Michigan, Pennsylvania, and North Carolina. By Morton O. Cooper, Scientific Assistant, C. M. Bennett, Agriculturist, and L. M. Church, Assistant. Pp. 35, figs. 8. Contribution from the Office of Farm Management, Office of the Secretary. (Professional Paper.) Feb. 20, 1917. (Department Bulletin 501.) Price, 5 cents.

Of interest to dairymen generally.

Digestibility of Some Vegetable Fats. By C. F. Langworthy, Chief, and A. D. Holmes, Scientific Assistant, Office of Home Economics. Pp. 20. Contribution from the States Relations Service. (Professional Paper.) Feb. 13, 1917. (Department Bulletin 505.) Price, 5 cents.

This bulletin records studies of the digestibility of olive oil, cottonseed oil, peanut oil, coconut oil, sesame oil, and cocoa butter, and is primarily of interest to students and investigators of food problems.

Wheat, Yields per Acre and Prices, by States, 50 Years 1866-1915. Pp. 16. Contribution from Bureau of Crop Estimates. Feb. 13, 1917. (Department Bulletin 514.) Price, 5 cents.

Suitable for general distribution.

Corn, Yields Per Acre and Prices, by States, 50 Years 1866-1915. Pp. 16. Contribution from the Bureau of Crop Estimates. Feb. 12, 1917. (Department Bulletin 515.) Price, 5 cents.

Suitable for general distribution.

An Intradermal Test for Bacterium Pullorum Infection in Fowls. By Archibald R. Ward and Bernard A. Gallagher, Pathological Division. Pp. 15. Contribution from the Bureau of Animal Industry. (Professional Paper.) Feb. 16, 1917. (Department Bulletin 517.) Price, 5 cents.

A report on the white diarrhea disease of fowls that is quite destructive, and should be serviceable to those who are interested in poultry and poultry diseases.

Annual Reports of the Department of Agriculture for the year ended June 30, 1916. (Report of the Secretary, with reports of heads of the several branches of the department.) Pp. 451. Price, 50 cents.

No copies available for free distribution.

MISCELLANEOUS.

List of Workers in Subjects Pertaining to Agriculture and Home Economics in the U. S. Department of Agriculture and in the State Agricultural Colleges and Experiment Stations. Corrected to January, 1917. Prepared in the Division of Publications. Price, 10 cents.

Width of Wagon Tires Recommended for Loads of Varying Magnitudes on Earth and Gravel Roads. By E. B. McCormick, Chief, Division of Rural Engineering, Office of Public Roads and Rural Engineering. Pp. 6. Feb. 12, 1917. (Circular 72, Office of the Secretary.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 8, No. 6. Feb. 5, 1917. Contents: *Sorosporella uvella* and Its Occurrence in Cutworms in America. (gz K-49.) By A. T. Speare.—Measurement of the Inactive, or Unfree, Moisture in the Soil by Means of the Dilatometer Method. (gy Mich.-5.) By George Bouyoucos.—Leafspot-Rot of Pond Lilies Caused by *Heliocosporium nymphaearum*. (hb G-105.) By Frederick V. Rand. Pp. 189-232, pls. 5, figs. 2. Price, 15 cents.

Same, Vol. 8, No. 7. Feb. 12, 1917. Contents: Studies of the Genus *Phytophthora*. (hd G-106.) By J. Rosenbaum.—*Tetrastichus bruchophagi*, a Recently Described Parasite of *Bruchophagus funebris*. (hc K-50.) By Theodore D. Urbahns. Pp. 233-282, pls. 8, figs. 13. Price, 20 cents.

Same, Vol. 8, No. 8. Feb. 19, 1917. Contents: Arsenical Injury Through the Bark of Fruit Trees. (hf Mont.-4.) By Deane E. Swingle and H. E. Morris. Pp. 283-318, pls. 6. Price, 15 cents.

Same, Vol. 8, No. 9. Feb. 26, 1917. Contents: A Squash Disease Caused by *Choanephora cucurbitarum*. (hg N. C.-3.) By Frederick A. Wolf.—Discovery of Internal Telia Produced by a Species of *Cronartium*. (he G-107.) By Reginald H. Colley.—Effect of Irrigation Water and Manure on the Nitrates and Total Soluble Salts of the Soil. (hi Utah-5.) By F. S. Harris and N. I. Butt. Pp. 319-359, pls. 4, figs. 18. Price, 15 cents.

Same, Vol. 7, No. 13. Contents and Index of Volume 7. Pp. xv-549-556. Price, 10 cents.

NOTE.—Beginning with Volume 5, The Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. XXXVI, No. 1. January, 1917. E. W. Allen, Ph. D., Editor. Pp. 1-100. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 3, No. 2. February, 1917. Pp. 13-20. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

NOTE.These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 117. January, 1917. Pp. 20. Feb. 23, 1917. Price, 5 cents.

Bureau of Chemistry. Supplement. No. 21. [N. J. 4501-4550.] Pp. 74. Feb. 8, 1917. Price, 10 cents.

Office of Markets and Rural Organization. No. 19. Pp. 11. Feb. 6, 1917. Price, 5 cents.

Office of Markets and Rural Organization. No. 20. Pp. 8. Feb. 7, 1917. Price, 5 cents.

SOIL SURVEYS.

NOTE.All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Reconnaissance Soil Survey of the San Francisco Bay Region, California. By L. C. Holmes, of the U. S. Department of Agriculture, In Charge, and J. W. Nelson, of the University of California. Pp. 112, pls. 4, fig. 1, map. (From F. O. Soils, 1914.) Price, 25 cents.

Soil Survey of Grant County, Indiana. By Lewis A. Hurst, In Charge, W. L. Watkins, and W. E. Tharp, of the U. S. Department of Agriculture, and Earl Hertenstein and Philip Middleton, of the Indiana Department of Geology. Pp. 36, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Starke County, Indiana. By E. J. Grimes, In Charge, and Wendell Barrett, of the Indiana Department of Geology, and T. M. Bushnell, of the U. S. Department of Agriculture. Pp. 42, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of White County, Indiana. By T. M. Bushnell, of the U. S. Department of Agriculture, In Charge, and C. P. Erni, of the Indiana Department of Geology. Pp. 43, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Sioux County, Iowa. By E. H. Smies, of the U. S. Department of Agriculture, In Charge, and W. C. Dean, of the Iowa Agricultural Experiment Station. Pp. 37, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Newton County, Missouri. By A. T. Sweet, In Charge, and E. S. Vanatta, of the U. S. Department of Agriculture, and E. V. Knobel, of the University of Missouri. Pp. 41, pls. 3, figs. 2. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Ripley County, Missouri. By F. Z. Hutton, of the U. S. Department of Agriculture, In Charge, and H. H. Krusekopf, of the University of Missouri. Pp. 36, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Alleghany County, North Carolina. By R. T. Avon Burke, of the U. S. Department of Agriculture, In Charge, and H. D. Lambert, of the North Carolina Department of Agriculture. Pp. 26, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Cambria County, Pennsylvania. By B. B. Derrick, In Charge, and A. L. Patrick, of the U. S. Department of Agriculture, and David C. Wimer, of the Pennsylvania State College. Pp. 32, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Hampton County, South Carolina. By M. W. Beck, In Charge, and A. L. Goodman. Pp. 37, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

SEPARATES.

The Dasheen: Its Uses and Culture. By Robert A. Young, Bureau of Plant Industry. Pp. 10, pls. 6. (Separate 689, Yearbook, 1916.) Price, 5 cents.

Some American Vegetable Food Oils, Their Sources and Methods of Production. By H. S. Bailey, Bureau of Chemistry. Pp. 18, pls. 4. (Separate 691, Yearbook, 1916.) Price, 5 cents.

Stallion Legislation and the Horse-Breeding Industry. By Charles C. Glenn, Bureau of Animal Industry. Pp. 11, pls. 4. (Separate 692, Yearbook, 1916.) Price, 5 cents.

Fur Farming as a Side Line. By Ned Dearborn, Bureau of Biological Survey. Pp. 18, pls. 2. (Separate 693, Yearbook, 1916.) Price, 5 cents.

The Function of Live Stock in Agriculture. By George M. Rommel, Bureau of Animal Industry. (Separate 694, Yearbook, 1916.) Price, 5 cents.

The Present Status of the Sugar-Beet Seed Industry in the United States. By C. O. Townsend, Bureau of Plant Industry. Pp. 12, pls. 5. (Separate 695, Yearbook, 1916.) Price, 5 cents.

Farmers' Mutual Fire Insurance. By V. N. Valgren, Office of Markets and Rural Organization. Pp. 13, figs. 4. (Separate 697, Yearbook, 1916.) Price, 5 cents.

Meeting the Farmer Halfway. By Carl Vrooman, Assistant Secretary of Agriculture. Pp. 13. (Separate 698, Yearbook, 1916.) Price, 5 cents.

A Federated Cooperative Cheese Manufacturing and Marketing Association. By Hector Macpherson and W. H. Kerr, Office of Markets and Rural Organization. Pp. 13. (Separate 699, Yearbook, 1916.) Price, 5 cents.

The Thanksgiving Turkey. By Andrew S. Weiant, Bureau of Animal Industry. Pp. 9, pls. 3. (Separate 700, Yearbook, 1916.) Price, 5 cents.

Development and Localization of Truck Crops in the United States. By Fred. J. Blair, Bureau of Crop Estimates. Pp. 31, figs. 2, maps 11. (Separate 702, Yearbook, 1916.) Price, 5 cents.

Business Essentials for Cooperative Fruit and Vegetable Canneries. By W. H. Kerr, Office of Markets and Rural Organization. Pp. 13. (Separate 705, Yearbook, 1916.) Price, 5 cents.

Sewage Disposal on the Farm. By George M. Warren, Office of Public Roads and Rural Engineering. Pp. 27, figs. 10. (Separate 712, Yearbook, 1916.) Price, 5 cents.

The Stable Manure Business in Big Cities. By C. C. Fletcher, Bureau of Soils. Pp. 3, pl. 1. (Separate 716, Yearbook, 1916.) Price, 5 cents.

Cooperative Bull Associations. By Joel G. Winkjer, Bureau of Animal Industry. Pp. 9, pls. 3. (Separate 718, Yearbook, 1916.) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 44, No. 11. November, 1916. [Feb. 1, 1917.] Pp. 611-639, charts 9, figs. 17. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation measurements during November, 1916. By H. H. Kimball.—The Duration and intensity of twilight. By H. H. Kimball.—Von Bezold's description of twilight.—Mairan's description of anti-twilight.—Explanations of the western purple light and the eastern afterglow (Nachglühen). By A. Heim.—Twilight phenomena in Arizona, September to December, 1916. By A. E. Douglass.—Twilight colors at Mount Wilson, Cal., August to September, 1916. By W. P. Hoge.—Solar halo of September 28, 1916, at Miami, Fla. By Richard W. Gray.—Metric system for aeronautics.—Measurement of horizontal and vertical movement in the atmosphere. By M. Tenani.—Daytime and nighttime precipitation and their economic significance. By J. B. Kincer.—Frequency curves of climatic phenomena. By H. R. Tolley.—Graphic method of representing and comparing drought intensities. By T. T. Munger.—Monthly distribution of mean cloudiness over France. By G. Bigourdan.—Path of sound rays in air under influence of temperature. By V. Komerell.

Monthly Weather Review. (For sale only.) Supplement No. 4. Jan. 19, 1917. Types of Anticyclones of the United States and Their Average Movements. By Edward H. Bowie and R. Hanson Weightman. Pp. 25, figs. 7, charts 73. Price, 25 cents.

National Weather and Crop Bulletin, No. 1, January, 1917, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

Snow and Ice Bulletins for Jan. 6, 13, 20, 27, 1917. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.



This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., *March 31, 1917.*

MONTHLY LIST OF PUBLICATIONS.

[MARCH, 1917.]

READ CAREFULLY BEFORE ORDERING.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

SPECIAL NOTICE.

Before mailing your request be sure and see that your name and complete post-office address (street number or rural route number as the case may be) is attached.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Breeds of Swine. By F. G. Ashbrook, Animal Husbandry Division. Pp. 16, figs. 12. Contribution from the Bureau of Animal Industry. March, 1917. (Farmers' Bulletin 765.)

Suitable for general distribution.

Turkey Raising. By Andrew S. Weiant, Animal Husbandry Division. Pp. 27, figs. 15. Contribution from the Bureau of Animal Industry. March, 1917. (Farmers' Bulletin 791.)

For general distribution.

Foxtail Millet, Its Culture and Utilization in the United States. By H. N. Vinall, Agronomist, Office of Forage-Crop Investigations. Pp. 28, figs. 10. Contribution from the Bureau of Plant Industry. March, 1917. (Farmers' Bulletin 793.)

Suitable for general distribution.

The Domesticated Silver Fox. By Ned Dearborn, Assistant Biologist. Pp. 32, figs. 27. Contribution from the Bureau of Biological Survey. March, 1917. (Farmers' Bulletin 795.)

This bulletin, based on Department Bulletin No. 301, "Silver Fox Farming in Eastern North America" (1915), has been prepared to supersede Farmers' Bulletin No. 328, "Silver Fox Farming" (1908).

How to Select Foods. I. What the Body Needs. By Caroline L. Hunt and Helen W. Atwater, Scientific Assistants, Office of Home Economics. Pp. 14, fig. 1. Contribution from the States Relations Service. March, 1917. (Farmers' Bulletin 808.)

Gives a simple method of selecting and combining food materials to provide an adequate, attractive, and economical diet.

The Small Vegetable Garden: Suggestions for Utilizing Limited Areas. Pp. 44, figs. 22. Prepared under the direction of the Bureau of Plant Industry. April, 1917. (Farmers' Bulletin 818.)

Contains specific suggestions for planning an intensive garden enterprise when a small space only is available. For general distribution.

DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Highway Bonds: A Compilation of Data and an Analysis of Economic Features Affecting Construction and Maintenance of Highways Financed by Bond Issues, and the Theory of Highway Bond Calculations. By Lawrence I. Hewes, Chief, Economics and Maintenance, and James W. Glover, Professor of Mathematics and Insurance, University of Michigan, Collaborator, Office of Public Roads. Pp. 78, pls. 9. Contribution from the Office of Public Roads and Rural Engineering. Revised Mar. 6, 1917. (Department Bulletin 136.) Price, 25 cents.

Lumbering in the Sugar and Yellow Pine Region of California. By Swift Berry, Forest Examiner. Pp. 99, pls. 13, figs. 2. Contribution from the Forest Service. (Professional Paper) Mar. 8, 1917. (Department Bulletin 440.) Price, 25 cents.

A description of methods of logging and manufacture and a statement of the general cost of lumbering in said region.

Handling and Marketing Durango Cotton in the Imperial Valley. By J. G. Martin, Investigator in Cotton Marketing, and G. C. White, Specialist in Transportation. Pp. 22, figs. 6. Contribution from the Office of Markets and Rural Organization. Mar. 31, 1917. (Department Bulletin 458.) Price, 5 cents.

Should be of interest to farmers of the Imperial Valley and others located in sections where staple cotton is grown, and to cotton buyers generally.

A Study of Cotton Market Conditions in North Carolina With a View to Their Improvement. By O. J. McConnell, Assistant in Cotton Marketing, Office of Markets and Rural Organization, and W. R. Camp, Chief, North Carolina Division of Markets. Pp. 19, fig. 1. Contribution from the Office of Markets and Rural Organization. Mar. 20, 1917. (Department Bulletin 476.) Price, 5 cents.

Of interest to cotton producers in North Carolina.

Sugar-Cane Culture for Sirup Production in the United States. By P. A. Yoder, Sugar-Cane Technologist, Office of Sugar-Beet Investigations. Pp. 46, figs. 19. Contribution from the Bureau of Plant Industry. Mar. 19, 1917. (Department Bulletin 486.) Price, 10 cents.

A description of the practices in vogue at the present time in the growing and handling of sugar cane where sirup is the main product.

A Study of American Beers and Ales. By L. M. Tolman, Chief, Central Inspection District, and J. Garfield Riley, Assistant Chemist, Food and Drug Inspection Laboratory, New York, N. Y. Pp. 23. Contribution from the Bureau of Chemistry. (Professional Paper.) Mar. 21, 1917. (Department Bulletin 493.) Price, 5 cents.

A technical study of this subject and of interest to brewers generally

The Cost of Producing Apples in Western Colorado. By S. M. Thomson, Scientific Assistant, and G. H. Miller, Assistant Agriculturist. Pp. 44, pls. 2, figs. 10. Contribution from the Office of Farm Management. Mar. 14, 1917. (Department Bulletin 500.) Price, 10 cents.

A detailed study, made in 1914-15, of the current cost factors involved in the maintenance of orchards and the handling of the crop on 125 farms in the fruit region of Mesa, Delta, and Montrose Counties.

Turnips, Beets, and Other Succulent Roots, and Their Use as Food. By C. F. Langworthy, Chief, Office of Home Economics. Pp. 19, figs. 4. Contribution from the States Relations Service. (Professional Paper.) Mar. 6, 1917. (Department Bulletin 503.) Price, 5 cents.

Is of special interest to housekeepers and to home economics extension workers, teachers, and students. It summarizes data regarding the nature, uses, and food value of succulent roots.

Studies on the Digestibility of Some Animal Fats. By C. F. Langworthy, Chief, and A. D. Holmes, Scientific Assistant, Office of Home Economics. Pp. 20. Contribution from the States Relations Service. (Professional Paper.) Mar. 24, 1917. (Department Bulletin 507.) Price, 5 cents.

This bulletin records studies of the digestibility of chicken fat, goose fat, brisket fat, cream fat in egg yolk, and fat or oil in fish. It is primarily of interest to students and investigators of food problems.

Yields from the Destructive Distillation of Certain Hardwoods. Second Progress Report. By R. C. Palmer, Chemist in Forest Products. Pp. 8, figs. 2. Contribution from the Forest Service. (Professional Paper.) Mar. 6, 1917. (Department Bulletin 508.) Price, 5 cents.

Gives the results of experiments in destructive distillation of hardwoods and is of interest to manufacturers of by-products.

The Theory of Drying and Its Application to the New Humidity-Regulated and Recirculating Dry Kiln. By Harry D. Tiemann, In Charge, Section of Timber Physics, Forest Products Laboratory. Pp. 28, figs. 3. Contribution from the Forest Service. (Professional Paper.) Mar. 17, 1917. (Department Bulletin 509.) Price, 5 cents.

A technical discussion of a new method of kiln drying hardwood lumber and of interest to manufacturers of lumber products.

Farm Practice in the Cultivation of Cotton. By H. R. Cates, Scientific Assistant, Office of Forage Crop Investigations. Pp. 62, figs. 20. Contribution from the Bureau of Plant Industry and the Office of Farm Management. (Professional Paper.) Mar. 31, 1917. (Department Bulletin 511.) Price, 10 cents.

The data presented in this bulletin represent the first step in a comprehensive study of farm tillage practice in the cultivation of cotton. Should be of value to all cotton growers.

Fumigation of Ornamental Greenhouse Plants with Hydrocyanic-Acid Gas. By E. R. Sasser, Collaborator, and A. D. Borden, Scientific Assistant. Pp. 20, figs. 3. Contribution from the Bureau of Entomology. Mar. 10, 1917. (Department Bulletin 513.) Price, 5 cents.

Of interest to owners of greenhouses.

The Cost of Producing Apples in the Hood River Valley. By S. M. Thomson, Scientific Assistant, and G. H. Miller, Assistant Agriculturist. Pp. 52, pls. 4, figs. 14. Contribution from the Office of Farm Management. Mar. 17, 1917. (Department Bulletin 518.) Price, 15 cents.

A detailed study, made in 1915, of the current cost factors involved in the maintenance of orchards and the handling of the crop on 54 farms.

Courses in Secondary Agriculture for Southern Schools. (First and Second Years.) By H. P. Barrows, Specialist in Agricultural Education. Pp. 53. Contribution from the States Relations Service. (Professional Paper.) Mar. 30, 1917. (Department Bulletin 521.) Price, 10 cents.

For use of teachers only.

Extension of Cotton Production in California. By O. F. Cook, Bionomist. Pp. 16. Contribution from the Bureau of Plant Industry. Mar. 3, 1917. (Department Bulletin 533.) Price, 5 cents.

Of interest to growers and prospective growers of cotton in the state.

MISCELLANEOUS.

Some Profitable and Unprofitable Coffee Lands. By T. B. McClelland, Assistant Horticulturist. Pp. 13, pls. 2, figs. 5. Mar. 13, 1917. (Bulletin 21, Porto Rico Agricultural Experiment Station.) Price, 5 cents.

A Lister Attachment for a Cotton Planter. By Stephen H. Hastings, Superintendent, Cooperative Testing Station, Sacaton, Arizona. Pp. 3, fig. 1. Mar. 27, 1917. (Doc. 2. Crop Physiology and Breeding Investigations, Bureau of Plant Industry.)

Of interest to cotton growers in the arid sections.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 8, No. 10, Mar. 6, 1917. Contents: The Relative Influence of Microorganisms and Plant Enzymes on the Fermentation of Corn Silage. (hh Iowa-4.) By A. R. Lamb.—Little-Leaf of the Vine. (hj Cal-9.) By Frederic T. Bioletti and Leon Bonnet. Pp. 361-398, pls. 4, figs. 17. Price, 15 cents.

Same, Vol. 8, No. 11, Mar. 12, 1917. Contents: Spore-Forming Bacteria of the Apiary. (hk K-51.) By Arthur H. McCray.—Fusarium-Blight, or Wilt Disease, of the Soybean. (hl N. C.-4.) By Richard O. Cromwell. Pp. 399-440, pls. 3, figs. 7. Price, 15 cents.

Journal of Agricultural Research. (For sale only.) Vol. 8, No. 12. Mar. 19, 1917. Contents: Peanut-Wilt Caused by *Sclerotium Rolfsii*. (hn Va-2.) By J. A. McClintock—Transformation of Pseudoglobulin into Euglobulin. (hq A-28.) By W. N. Berg.—Dissemination of the Angular Leafspot of Cotton. (ho S. C.-1.) By R. C. Faulwetter. Pp. 441-475, pls. 2, fig. 1. Price, 15 cents.

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Experiment Station Record. Vol. XXXVI, No. 2, February, 1917. E. W. Allen, Ph. D., Editor. Pp. 101-200. Price, 15 cents.

Same, Vol. XXXVI, No. 3. Abstract Number. Pp. 201-300. Mar. 24, 1917. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 3, No. 3, March, 1917. Pp. 21-28. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

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Bureau of Animal Industry. No. 118. February, 1917. Pp. 21-27. Mar. 22, 1917. Price, 5 cents.

Bureau of Chemistry. No. 19. Pp. 49-54. Mar. 12, 1917. Price, 5 cents.

Bureau of Chemistry. Supplement No. 22. [N. J. 4551-4600.] Pp. 75-144. Mar. 15, 1917. Price, 10 cents.

Federal Horticultural Board. No. 36. January, 1917. Pp. 6. Mar. 1, 1917. Price, 5 cents.

Federal Horticultural Board. No. 37. February, 1917. Pp. 7-14. Mar. 26, 1917. Price, 5 cents.

Office of Markets and Rural Organization. No. 21. Pp. 7. Mar. 28, 1917. Price, 5 cents.

Office of Markets and Rural Organization. No. 22. Official Grain Standards of the United States for Wheat. Pp. 29. Mar. 31, 1917. Price, 5 cents.

SOIL SURVEYS.

NOTE. All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Latah County, Idaho. By J. H. Agee, of the U. S. Department of Agriculture, and George W. Graves and C. B. Mickelwaite, of the University of Idaho. Pp. 24, pls. 3, figs. 2, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Wells County, Indiana. By W. E. Tharp, of the U. S. Department of Agriculture and W. E. Wiley, of the Indiana Department of Geology. Pp. 29, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Van Buren County, Iowa. By Clarence Lounsbury, of the U. S. Department of Agriculture, and H. W. Reid, of the Iowa Agricultural Experiment Station. Pp. 32, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Washington County, Nebraska. By L. Vincent Davis, of the U. S. Department of Agriculture, and H. C. Mortlock, of the Nebraska Soil Survey. Pp. 38, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Davidson County, North Carolina. By R. B. Hardison, of the U. S. Department of Agriculture, and L. L. Brinkley, of the North Carolina Department of Agriculture. Pp. 39, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

A Soil Survey of Blair County, Pennsylvania. By J. O. Veatch, of the U. S. Department of Agriculture, and Harry P. Young and H. P. Cooper, of the Pennsylvania State College. Pp. 48, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Lewis and Gilmer Counties, West Virginia. By W. J. Latimer. Pp. 34, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

SEPARATES.

The Plant-Introduction Gardens of the Department of Agriculture. By P. H. Dorsett, Plant Introducer, Office of Foreign Seed and Plant Introduction, Bureau of Plant Industry. Pp. 10, pls. 10. (Separate 687, Yearbook, 1916.) Price, 5 cents.

Opening Up the National Forests by Road Building. By O. C. Merrill, Chief Engineer, Forest Service. Pp. 9, pls. 3. (Separate 696, Yearbook, 1916.) Price, 5 cents.

Possibilities of a Market Train Service. By G. C. White and T. F. Powell, Office of Markets and Rural Organization. Pp. 11. (Separate 701, Yearbook, 1916.) Price, 5 cents.

Pumping for Irrigation on the Farm. By P. E. Fuller, Irrigation Engineer, Office of Public Roads and Rural Engineering. Pp. 14, pl. 1. (Separate 703, Yearbook, 1916.) Price, 5 cents.

The Practical Use of the Insect Enemies of Injurious Insects. By L. O. Howard, Entomologist and Chief, Bureau of Entomology. Pp. 16, figs. 8. (Separate 704, Yearbook, 1916.) Price, 5 cents.

Suppression of the Gipsy and Brown-Tail Moths and Its Value to States Not Infested. By A. F. Burgess, In Charge of Gipsy and Brown-Tail Moth Investigations, Bureau of Entomology. Pp. 10, pls. 7. (Separate 706, Yearbook, 1916.) Price, 5 cents.

An Experiment in Community Dairying. By R. R. Welch, Dairy Division, Bureau of Animal Industry. Pp. 8, pl. 1, fig. 1. (Separate 707, Yearbook, 1916.) Price, 5 cents.

Destroying Rodent Pests on the Farm. By David E. Lantz, Assistant Biologist, Bureau of Biological Survey. Pp. 18, pls. 5, fig. 1. (Separate 708, Yearbook, 1916.) Price, 5 cents.

Progress in Handling the Wool Clips: Development in the West. By F. R. Marshall, Animal Husbandry Division, Bureau of Animal Industry. Pp. 10, pls. 4, fig. 1. (Separate 709, Yearbook, 1916.) Price, 5 cents.

The Effect of Home Demonstration Work on the Community and the County in the South. By Bradford Knapp, Chief, and Mary E. Creswell, Assistant in Charge of Home Demonstration Work, States Relations Service. Pp. 16, pls. 3. (Separate 710, 1916.) Price, 5 cents.

Cooperative Work for Eradicating Citrus Canker. By Karl F. Kellerman, Associate Chief, Bureau of Plant Industry. Pp. 6, pls. 4. (Separate 711, Yearbook, 1916.) Price, 5 cents.

A Graphic Summary of World Agriculture. By V. C. Finch, O. E. Baker, and R. G. Hainsworth, Office of Farm Management. 5 p. text, 19 p. graphs. (Separate 713, Yearbook, 1916.) Price, 15 cents.

The Meat Inspection Service of the United States Department of Agriculture. By George Ditewig, Bureau of Animal Industry. Pp. 21, pls. 11, figs. 5. (Separate 714, Yearbook, 1916.) Price, 15 cents.

Importance of Developing our Natural Resources of Potash. By Frederick W. Brown, Assistant in Charge Investigations of Fertilizer Resources, Bureau of Soils. Pp. 10, pl. 1. (Separate 717, Yearbook, 1916.) Price, 5 cents.

Statistics of Grain Crops, 1916. Pp. 50. (Separate 719, Yearbook, 1916.) Price, 10 cents.

Statistics of Crops Other than Grain Crops. Pp. 47. (Separate 720, Yearbook, 1916.) Price, 10 cents.

Live Stock, 1916, and Miscellaneous Data. Pp. 47. (Separate 721, Yearbook, 1916.) Price, 10 cents.

Imports and Exports of Agricultural Products. Pp. 37. (Separate 722, Yearbook, 1916.) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 44, No. 12, December, 1917. [Feb. 28, 1917.] Pp. 671-712, charts 11, figs. 8. Price, 25 cents per copy, \$2.50 per year.

Special Articles: Current evaporation observations by the Weather Bureau. By B. C. Kadel and C. Abbe, jr.—Slope and valley air temperatures. By W. R. Blair.—Low pressure at Paris, November 18, 1916. By A. Angot.—Thunder and hail in the Paris region. By A. Angot.—On the kinetic theory of evaporation. By A. March.—Temperature of the ocean below the 500-fathom line on the west coast of America. By A. H. Clark.—Surface currents of Jupiter during 1915-1916. By S. Bolton.

National Weather and Crop Bulletin, No. 2, February, 1917, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

Snow and Ice Bulletins for Feb. 6, 13, 20, 27, 1917. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., April 30, 1917.

MONTHLY LIST OF PUBLICATIONS.

[APRIL, 1917.]

READ CAREFULLY BEFORE ORDERING.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

SPECIAL NOTICE.

Before mailing your request be sure and see that your name and complete postoffice address (street number or rural route number as the case may be) is attached.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

The Windbreak as a Farm Asset. By Carlos G. Bates, Forest Examiner. Pp. 16, figs. 8. Contribution from the Forest Service. April, 1917. (Farmers' Bulletin 788.)

Shows the necessity for windbreaks and the results obtained by planting them.

Aphids Injurious to Orchard Fruits, Currant, Gooseberry, and Grape. By A. L. Quaintance, Entomologist in Charge of Deciduous Fruit Insect Investigations, and A. C. Baker, Entomological Assistant. Pp. 42, figs. 30. Contribution from the Bureau of Entomology. April, 1917. (Farmers' Bulletin 804.)

Is of interest to orchardists, vineyardists, and growers of currants and gooseberries in all parts of the United States.

Bread and Bread Making in the Home. By Caroline L. Hunt, Scientific Assistant, Office of Home Economics, States Relations Service, and Hannah L. Wessling, Assistant Chemist, Bureau of Chemistry. Pp. 26, figs. 2. Contribution from the States Relations Service. April, 1917. (Farmers' Bulletin 807.)

Of special interests to housekeepers.

DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Marketing and Distribution of Strawberries in 1915. By O. W. Schleussner and J. C. Gilbert, Assistant in Market Surveys. Pp. 32, figs. 15. Contribution from the Office of Markets and Rural Organization. Apr. 2, 1917. (Department Bulletin 477.) Price, 10 cents.

Of interest to strawberry growers, shippers, transportation companies, and consumers, and to all engaged in the trade in berries and fruits.

Control of the Gipsy Moth by Forest Management. Part 1. The Gipsy Moth in Woods. By G. E. Clement, Assistant in Forest Management. Part 2. Management of Typical Woodlots Infested with the Gipsy Moth in the White-Pine Region. By Willis Munro, Assistant in Forest Management. Pp. 54, map. Contribution from the Bureau of Entomology in cooperation with the Forest Service. (Professional Paper.) Apr. 9, 1917. (Department Bulletin 484.) Price, 20 cents.

Suitable for distribution in regions infested with this insect.

Tests of Western Yellow Pine Car Sills, Joists, and Small Clear Pieces. By C. W. Zimmerman, Engineer in Forest Products. Pp. 16, pl. 1, figs. 4. Contribution from the Forest Service in cooperation with the University of Washington. (Professional Paper.) Apr. 4, 1917. (Department Bulletin 497.) Price, 5 cents.

Of interest to builders and engineers.

The Drainage of Irrigated Shale Land. By Dalton G. Miller, Senior Drainage Engineer, and L. T. Jessup, Junior Drainage Engineer. Pp. 40, pls. 9, figs. 7. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Apr. 23, 1917. (Department Bulletin 502.) Price, 15 cents.

Contains information on the drainage of those irrigated lands of the Rocky Mountain States that are underlain by shale.

Production of Lumber, Lath, and Shingles in 1915, and Lumber in 1914. By J. C. Nellis, Forest Examiner. Pp. 45, pls. 2, figs. 4. Contribution from the Forest Service. (Professional Paper.) Apr. 21, 1917. (Department Bulletin 506.) Price, 10 cents.

Of interest to lumbermen and builders generally.

Prevention of the Erosion of Farm Lands by Terracing. By C. E. Ramser, Drainage Engineer. Pp. 40, pls. 8, figs. 17. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Apr. 5, 1917. (Department Bulletin 512.) Price, 15 cents.

This bulletin treats of terracing as a means of preventing erosion of hillside land. It describes the different types of terraces and points out the applicability of each to the various kinds of soil and topography. It discusses the principles of terrace design. While the investigations upon which the recommendations are based were made in the Southern States, the information is applicable generally to any State in the humid section.

Experiments in the Determination of the Digestibility of Millets. By C. F. Langworthy, Chief, and A. D. Holmes, Scientific Assistant, Office of Home Economics. Pp. 9. Contribution from the States Relations Service. (Professional Paper.) Apr. 7, 1917. (Department Bulletin 525.) Price, 5 cents.

This is a technical report of studies of the digestibility of millet in relation to its use as food and is of special interest to investigators and students of human nutrition.

Seasonal Distribution of Farm Labor in Chester County, Pa. By George A. Billings, Agriculturist. Pp. 29, figs. 3. Contribution from the Office of Farm Management. Apr. 13, 1917. (Department Bulletin 528.) Price, 10 cents.

Of interest to farmers generally.

Validity of the Survey Method of Research. By W. J. Spillman, Chief, Office of Farm Management. Pp. 15. Contribution from the Office of Farm Management. (Professional Paper.) Apr. 5, 1917. (Department Bulletin 529.) Price, 5 cents.

A study of the accuracy of farm records obtained in farm management investigations.

The Results of Physical Tests of Road-Building Rock in 1916, Including All Compression Tests. By Prevost Hubbard, Chemical Engineer, and Frank H. Jackson, Jr., Assistant Testing Engineer. Pp. 23. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Apr. 21, 1917. (Department Bulletin 537.) Price, 5 cents.

Is a supplement to Department Bulletin 370, and of interest to road engineers and contractors.

MISCELLANEOUS.

Report of the Hawaii Agricultural Experiment Station, 1916. Pp. 46, pls. 6. Apr. 6, 1917. Price, 10 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 9, No. 1. April 2, 1917. Contents: A New Bacterial Citrus Disease. (hp Cal.-10.) By H. Atherton Lee.—Some Facts about Abortion Disease. (hr A-29.) By E. C. Schroeder and W. E. Cotton.—Wheat-Sheath Miner. (hm Mont.-5.) By H. L. Seamans. Pp. 1-25, pls. 3, fig. 1. Price, 10 cents.

Same, Vol. 9, No. 2. April 9, 1917. Contents: Relation of the Water-Retaining Capacity of a Soil to Its Hygroscopic Coefficient. (hs Minn.-12.) By Frederick J. Alway and Guy R. McDole. Pp. 27-71, fig. 1. Price, 10 cents.

Same, Vol. 9, No. 3. April 16, 1917. Contents: Absorption of Nutrients as Affected by the Number of Roots Supplied with the Nutrient. (hu B-13.) By P. L. Gile and J. O. Carrero. Pp. 73-95, figs. 2. Price, 10 cents.

Same, Vol. 9, No. 4. Apr. 23, 1917. Contents: Flow Through Submerged Rectangular Orifices with Modified Contractions. (ht D-9.) By V. M. Cone.—The Venturi Flume. (hx D-10.) By V. M. Cone. Pp. 97-129, figs. 27. Price, 15 cents.

Same, Vol. 9, No. 5. Apr. 30, 1917. Contents: Morphology of Normal Pigs' Blood. (hy Minn.-13.) By C. C. Palmer.—Fixation of Ammonia in Soils. (hv G-108.) By I. G. McBeth. Pp. 131-155, fig. 1. Price, 10 cents.

NOTE.—The Journal of Agricultural Research prints technical reports of original research, is issued weekly, and is distributed to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the Department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year (52 numbers).

Experiment Station Record. Vol. XXXVI, No. 4, March, 1917. E. W. Allen, Ph. D., Editor. Pp. 301-400. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

Same, Vol. 36, No. 5. April, 1917. Pp. 401-500. Price, 15 cents.

The Monthly Crop Report. Vol. 3, No. 4, April, 1917. Pp. 29-36. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

NOTE.—These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 119. March, 1917. Pp. 29-37. Apr. 19, 1917. Price, 5 cents.

Bureau of Chemistry. Supplement No. 23. [N. J. 4601-4650.] Pp. 145-201. Apr. 27, 1917. Price, 10 cents.

SOIL SURVEYS.

NOTE.—All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Buchanan County, Missouri. By B. W. Tillman, of the U. S. Department of Agriculture, and C. E. Deardorff, of the University of Missouri. Pp. 46, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Polk County, Nebraska. By J. M. Snyder, of the U. S. Department of Agriculture, and Thomas E. Kokjer, of the Nebraska Soil Survey. Pp. 30, fig. 1, map. (From F. O. Soils, 1915.) Price, 10 cents.

Soil Survey of the Camden Area, New Jersey. By A. L. Patrick, of the U. S. Department of Agriculture, C. C. Engle, of the Geological Survey of New Jersey, and L. L. Lee, of the New Jersey Agricultural Experiment Station. Pp. 45, pls. 5, figs. 3, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Hamilton County, Ohio. By A. L. Goodman, of the U. S. Department of Agriculture, and E. R. Allen and S. W. Phillips, of the Ohio Agricultural Experiment Station. Pp. 39, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

SEPARATES.

Color as an Indicator of the Picking Maturity of Fruits and Vegetables. By L. C. Corbett. Bureau of Plant Industry. Pp. 8, pls. 6. (Separate 686, Yearbook, 1916.) Price, 10 cents.

Farm Tenantry in the United States. By W. J. Spillman and E. A. Goldenweiser, Office of Farm Management. Pp. 26, figs. 8. (Separate 715, Yearbook, 1916.) Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 1. January, 1917. Pp. 1-46, charts 9, figs. 3. Price, 25 cents a copy, \$2.50 a year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation measurements during January, 1917. By H. H. Kimball.—Notes on the horizontal rainbow. By Saemontarô Nakamura.—Aurora of August 26, 1916, observed at Hessel, Mich. By F. E. Nipher.—Relation of the weather to the amount of cotton ginned during certain periods. By J. B. Kincer.—Grasshoppers at sea. By W. E. Hurd.—National Meteorological Service of Colombia.—Another "Dark Day of May 19, 1780"?—Alternate deposition of rauhreif and rauheis. By W. R. Blair.

Monthly Weather Review. (For sale only.) Supplement No. 5. Aerology No. 2. Mar. 31, 1917. Pp. 59, figs. 6. Price, 25 cents.

Contents: Free-Air Data at Drexel Aerological Station, January, February, and March, 1916. By William R. Blair and others.

National Weather and Crop Bulletin, No. 3, March, Nos. 4, 5, 6, April, 1917, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

Snow and Ice Bulletins for April 3, 1917. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by report from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.

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United States Department of Agriculture,

WASHINGTON, D. C., May 31, 1917.

MONTHLY LIST OF PUBLICATIONS.

[MAY, 1917.]

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Some Common Edible and Poisonous Mushrooms. By Flora W. Patterson, Mycologist, and Vera K. Charles, Assistant Mycologist, Office of Pathological Collections. Pp. 24, figs. 22. Contribution from the Bureau of Plant Industry. March, 1917. (Farmers' Bulletin 796.)

For general distribution.

Standard Varieties of Chickens. 1. The American Class. By Rob R. Slocum, Animal Husbandry Division. Pp. 19, figs. 13. Contribution from the Bureau of Animal Industry. April, 1917. (Farmers' Bulletin 806.)

Suitable for general distribution.

Marketing Live Stock in the South. Suggestions for Improvement. By S. W. Doty, Assistant in Marketing Live Stock and Meats. Pp. 16. Contribution from the Office of Markets and Rural Organization. Apr., 1917. (Farmers' Bulletin 809.)

The purpose of this bulletin is to place before southern farmers who produce stock in small lots and who are experiencing difficulty in marketing their live stock the more important local marketing plans which have been found successful in certain communities and which are practicable under southern conditions.

The Production of Baby Beef. By S. H. Ray, Animal Husbandry Division. Pp. 22, figs. 8. Contribution from the Bureau of Animal Industry. April, 1917. (Farmers' Bulletin 811.)

For general distribution.


Minor Articles of Farm Equipment. By H. N. Humphrey, Scientific Assistant, and A. P. Yerkes, Assistant Agriculturist. Pp. 15. Contribution from the Office of Farm Management. May, 1917. (Farmers' Bulletin 816.)

Gives the number and cost of all minor articles of equipment necessary for a farm of the general type.

Sugar-Beet Sirup. By C. O. Townsend, Pathologist in Charge of Sugar-Beet Investigations, Bureau of Plant Industry, and H. C. Gore, Chemist in Charge of Fruit and Vegetable Utilization Laboratory, Bureau of Chemistry. Pp. 13, figs. 9. Contribution from the Bureau of Plant Industry and the Bureau of Chemistry. May, 1917. (Farmers' Bulletin 823.)

Tells how to grow sugar beets in the garden and describes a simple process of making from them a nutritious table sirup. Suitable for general distribution.

DEPARTMENT BULLETINS—TECHNICAL.

 The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Public Road Mileage and Revenues in the Central, Mountain, and Pacific States, 1914. Prepared jointly by the Division of Road Economics of the Office of Public Roads and Rural Engineering and State Collaborator. Pp. 56+i-lxxv. Contribution from the Office of Public Roads and Rural Engineering. May 10, 1917. (**Department Bulletin 389.**) Price, 15 cents.

A compilation showing mileage of improved and unimproved roads; sources and amounts of road revenues; bonds issued and outstanding; and a description of the systems of road administration, fiscal management, and other factors affecting road improvement in each state.

Reforestation on the National Forests. By C. R. Tillotson, Forest Examiner. Pp. 63, pls. 11, figs. 5. Contribution from the Forest Service. (Professional Paper.) May 28, 1917. (**Department Bulletin 475.**) Price, 20 cents.

This bulletin supersedes Forest Service Bulletin 98, "Reforestation on the National Forests," by W. T. Cox, on which the material relating to seed collecting and direct seeding is largely based.

The Status and Value of Farm Woodlots in the Eastern United States By E. H. Frothingham, Forest Examiner. Pp. 44, figs. 2, map. Contribution from the Forest Service. May 11, 1917. (**Department Bulletin 481.**) Price, 15 cents.

Of interest to owners of farm woodlots.

The Theory of Correlation as Applied to Farm-Survey Data on Fattening Baby Beef. By H. R. Tolley, Scientific Assistant. Pp. 15. Contribution from the Office of Farm Management. (Professional Paper.) May 23, 1917. (**Department Bulletin 504.**) Price, 5 cents.

An analysis of the data on fattening baby beef animals, showing the factors most important in determining the profit.

Timber Storage Conditions in the Eastern and Southern States with Reference to Decay Problems. By C. J. Humphrey, Pathologist, Office of Investigations in Forest Pathology. Pp. 43, pls. 10, figs. 41. Contribution from the Bureau of Plant Industry. (Professional Paper.) May 17, 1917. (**Department Bulletin 510.**) Price, 20 cents.

Describes causes of decay in stored timber and suggests methods of prevention.

Detection of Lime Used as a Neutralizer in Dairy Products. By H. J. Wichmann, Assistant Chemist, Food and Drug Inspection Laboratory, Denver, Colo. Pp. 23. Contribution from the Bureau of Chemistry. (Professional Paper.) May 7, 1917. (**Department Bulletin 524.**) Price, 5 cents.

This bulletin will be useful to officials of State dairy and food departments.

The Organization and Management of a Farmers' Mutual Fire Insurance Company. By V. N. Valgren, Investigator in Agricultural Insurance. Pp. 34. Contribution from the Office of Markets and Rural Organization. May 8, 1917. (**Department Bulletin 530.**) Price, 5 cents.

This bulletin is intended mainly for two classes of readers—those contemplating the organization of a farmers' mutual fire insurance company and those desiring to improve the methods and practices of an existing company. It aims to outline principles and methods developed by successful companies of this kind and to set forth the advanced ideas held by their officers, rather than to discuss the subject theoretically.

Rhizopus Rot of Strawberries in Transit. By Neil E. Stevens, Pathologist, and R. B. Wilcox, Scientific Assistant, Fruit Disease Investigations. Pp. 22, fig. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) May 28, 1917. (**Department Bulletin 531.**) Price, 5 cents.

Is of interest to botanists, pathologists, and strawberry growers and shippers, especially in the Southern States.

The Business of Ten Dairy Farms in the Bluegrass Region of Kentucky. By J. H. Arnold, Agriculturist. Pp. 12. Contribution from the Office of Farm Management. May 24, 1917. (**Department Bulletin 548.**) Price, 5 cents.

Shows how these farms were organized and made profitable. Of interest to all farmers engaged in dairy farming.

Crossties Purchased and Treated in 1915. By Arthur M. McCreight, Office of Industrial Investigations. Pp. 8. Contribution from the Forest Service. May 5, 1917. (Department Bulletin 549.) Price, 5 cents.

A compilation of statistics on the number of crossties purchased in the United States during 1915 by the steam and electric roads, and electric light, heat, and power companies.

A Comparison of Several Classes of American Wheats and a Consideration of Some Factors Influencing Quality. By L. M. Thomas, Grain Supervisor, in Charge of Milling and Baking Investigations. Pp. 28, figs. 21. Contribution from the Bureau of Plant Industry and the Office of Markets and Rural Organization. May 18, 1917. (Department Bulletin 557.) Price, 5 cents.

Of interest to grain and food inspectors, and millers generally.

MISCELLANEOUS.

Yearbook of the U. S. Department of Agriculture, 1915. Pp. 783, pls. 95, figs. 74. Price, \$1.00.

This Yearbook contains the annual report of the Secretary, 61 pages; 33 miscellaneous articles, 494 pages; an appendix, 188 pages; an index, 40 pages. Only 6 out of each 100 copies are allotted to this department, which number is insufficient to supply even its regular correspondents. Other applicants are therefore respectfully referred to their Representative or Delegate in Congress, as the other 94 per cent is allotted to that body. The Superintendent of Documents, Government Printing Office, Washington, D. C., has it for sale at \$1.00 per copy.

Chemical Studies of the Efficiency of Legumes as Green Manures in Hawaii. By Alice R. Thompson, Assistant Chemist. Pp. 26. May 7, 1917. (Bulletin 43, Hawaii Agricultural Experiment Station.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 9, No. 6. May 7, 1917. Contents: Composition of Citrus Leaves at Various Stages of Mottling. (if G-109.) By Charles A. Jensen.—Effects of Muscular Exercise and the Heat of the Sun on the Blood and Body Temperature of Normal Pigs. (hw. Minn. 14.) By C. C. Palmer. Pp. 157-182, figs. 2. Price, 10 cents.

Same, Vol. 9, No. 7. May 14, 1917. Contents: Relation of the Transformation and Distribution of Soil Nitrogen to the Nutrition of Citrus Plants. (hz G-110.) By L. G. McBeth. Pp. 183-252, figs. 19. Price, 15 cents.

Same, Vol. 9, No. 8. May 21, 1917. Contents: Effect of Decomposing Organic Matter on the Solubility of Certain Inorganic Constituents of the Soil. (ja G-111.) By Charles A. Jensen.—Xylaria Rootrot of Apple. (ii N. C.-5.) By Frederick A. Wolf and Richard O. Cromwell. Pp. 253-276, pl. 1, figs. 2. Price, 10 cents.

Same, Vol. 9, No. 9. May 28, 1917. Contents: A Comparison of the Hourly Evaporation Rate of Atmometers and Free Water Surfaces with the Transpiration Rate of *Medicago sativa*. (ic G-112.) By Lyman J. Briggs and H. L. Shantz.—Influence of Crop, Season, and Water on the Bacterial Activities of the Soil. (id Utah-6.) By J. E. Greaves, Robert Stewart, and C. T. Hirst. Pp. 277-341, pls. 2, figs. 5. Price, 20 cents.

NOTE.—The Journal of Agricultural Research prints technical reports of original research, is issued weekly, and is distributed to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the Department. It will not be sent free to individuals. The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year (52 numbers).

Experiment Station Record. Vol. XXXVI, No. 6. Abstract Number. E. W. Allen, Ph. D., Editor. Pp. 501-600. Price, 15 cents.

Same, Vol. XXXV, Index Number. Pp. xxiii+901-995. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 3, No. 5, May, 1917. Pp. 37-44. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

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Bureau of Chemistry. Supplement No. 24. [N. J. 4651-4700.] Pp. 203-259. May 4, 1917. Price, 10 cents.

Federal Horticultural Board. No. 38. March, 1917. Pp. 15-35. May 5, 1917. Price, 5 cents.

Insecticide and Fungicide Board. No. 15. Pp. 193-226. May 28, 1917. Price, 5 cents.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of New Castle County, Delaware. By T. M. Morrison, of the U. S. Department of Agriculture, and William B. Seward and Oliver I. Snapp, of the Delaware Agricultural Experiment Station. Pp. 34, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Cowley County, Kansas. By E. C. Hall, R. H. Hall, and B. W. Tilman. Pp. 46, pls. 2, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Chickasaw County, Mississippi. By E. M. Jones, of the Mississippi Geological Survey, and C. S. Waldrop, of the U. S. Department of Agriculture. Pp. 38, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Richardson County, Nebraska. By A. H. Meyer, of the U. S. Department of Agriculture, and Paul H. Stewart and C. W. Watson, of the Nebraska Soil Survey. Pp. 36, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 2, February, 1917. [April 30, 1917.] Pp. 47-90, charts 9, figs. 9. Price, 25 cents per copy, \$2.50 per year.

Solar and sky radiation measurements during February, 1917. By H. H. Kimball.—The smoke cloud and the high haze of 1916. By H. H. Kimball.—Free-air data in the Hawaiian Islands, July, 1915. By Col. W. E. Ellis.—Weather Bureau exhibit at the First Pan-American Aeronautic Exposition. By W. R. Gregg.—Sound areas of the explosion at East London, January 19, 1917. By Charles Davison.—Parhelic circle with two pairs of parhelia at Fargo, N. Dak. By C. L. Meller.—Competency of wind in land depletion. By C. R. Keyes.—Formation of winter stratus; Depth of northeast wind. By Douglas Manning.

Monthly Weather Review. (For sale only.) Supplement No. 6. Pp. 61, figs. 7, charts, 34. May 7, 1917. Price, 25 cents.

Contents: Relative Humidities and Vapor Pressures over the United States, including a discussion of data from recording hair hygrometers. By Peter C. Day.

Title-page, Contents, and Index to Monthly Weather Review, Vol. 44, 1916. Pp. 15.

National Weather and Crop Bulletin, Nos. 7, 8, 9, 10, 11, May, 1917, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., June 30, 1917.

MONTHLY LIST OF PUBLICATIONS.

[JUNE, 1917.]

READ CAREFULLY BEFORE ORDERING.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

SPECIAL NOTICE.

Before mailing your request be sure and see that your name and complete post-office address (street number or rural route number as the case may be) is attached.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Sweet Clover: Growing the Crop. By H. S. Coe, Assistant Agronomist, Office of Forage-Crop Investigations. Pp. 35, figs. 11. Contribution from the Bureau of Plant Industry. (Farmers' Bulletin 797.)

Suitable for general distribution.

The Sheep Tick and Its Eradication by Dipping. By Marion Imes, Zoological Division. Pp. 31, figs. 15. Contribution from the Bureau of Animal Industry. May, 1917. (Farmers' Bulletin 798.)

For general distribution.

Carbon Disulphid as an Insecticide. By W. E. Hinds, Entomologist, Alabama Experiment Station. Pp. 21. Contribution from the Bureau of Entomology. June, 1917. (Farmers' Bulletin 799.)

A revision of Farmers' Bulletin 145. Suitable for general distribution.

Mites and Lice on Poultry. By F. C. Bishopp, Entomologist, and H. P. Wood, Entomological Assistant. Pp. 27, figs. 14. Contribution from the Bureau of Entomology. May, 1917. (Farmers' Bulletin 801.)

For general distribution.

Horse-Breeding Suggestions for Farmers. By H. H. Reese, Animal Husbandry Division. Pp. 22, figs. 10. Contribution from the Bureau of Animal Industry. May, 1917. (Farmers' Bulletin 803.)

Suitable for general distribution.

The Drainage of Irrigated Farms. By R. A. Hart, Senior Drainage Engineer. Pp. 31, figs. 19. Contribution from the Office of Public Roads and Rural Engineering. June, 1917. (Farmers' Bulletin 805.)

Describes method of and necessity for the drainage of farms of this character.

Equipment for Farm Sheep Raising. By V. O. McWhorter, Animal Husbandry Division. Pp. 28, figs. 37. Contribution from the Bureau of Animal Industry. June, 1917. (Farmers' Bulletin 810.)

For general distribution.

How Live Stock is Handled in the Bluegrass Region of Kentucky. By J. H. Arnold, Agriculturist. Pp. 14. Contribution from the Office of Farm Management. May, 1917. (Farmers' Bulletin 812.)

Of interest to live-stock farmers generally.

Bermuda Grass. By Samuel M. Tracy, Agronomist, Office of Forage-Crop Investigations. Pp. 19, figs. 2. Contribution from the Bureau of Plant Industry. May, 1917. (Farmers' Bulletin 814.)

Describes method of cultivation, uses, and value of this plant. Especially suitable for distribution in the Southern States.

How to Select Foods. II. Cereal Foods. By Caroline L. Hunt and Helen W. Atwater, Scientific Assistants, Office of Home Economics. Pp. 23, figs. 4. Contribution from the States Relations Service. May, 1917. (Farmers' Bulletin 817.)

For general distribution.

Sweet Clover: Utilization. By H. S. Coe, Assistant Agronomist, Forage-Crop Investigations. Pp. 32, figs. 13. Contribution from the Bureau of Plant Industry. May, 1917. (Farmers' Bulletin 820.)

Suitable for general distribution.

Watermelon Diseases. By W. A. Orton, Pathologist in Charge of Cotton, Truck, and Forage Crop Disease Investigations. Pp. 18, figs. 11. Contribution from the Bureau of Plant Industry. May, 1917. (Farmers' Bulletin 821.)

Especially applicable to conditions in the Southeastern States.

Live-Stock Classifications at County Fairs. By S. H. Ray, Animal Husbandry Division. Pp. 12. Contribution from the Bureau of Animal Industry. June, 1917. (Farmers' Bulletin 822.)

Of interest to fair officials and prospective exhibitors.

Shallu, or "Egyptian Wheat" a Late-Maturing Variety of Sorghum. By Benton E. Rothgeb, Scientific Assistant in Grain-Sorghum and Broom-Corn Investigations. Pp. 8, figs. 4. Contribution from the Bureau of Plant Industry. June, 1917. (Farmers' Bulletin 827.)

Applicable to the southern Great Plains under dry-land conditions.

How to Detect Outbreaks of Insects and Save the Grain Crops. By W. R. Walton, Entomologist in Charge of Cereal and Forage Insect Investigations. Pp. 24, figs. 14. Contribution from the Bureau of Entomology. June, 1917. (Farmers' Bulletin 835.)

For general distribution.

Harvesting Hay With the Sweep-Rake. By Arnold P. Yerkes, Assistant Agriculturist, and H. B. McClure, Agriculturist. Pp. 12, figs. 11. Contribution from the Office of Farm Management. June, 1917. (Farmers' Bulletin 838.)

Describes a means by which eastern hay-growers may save labor.

Home Canning by the One-Period Cold-Pack Method, Taught to Canning Club Members in the Northern and Western States. By O. H. Benson, Agriculturist in Charge of Boys' and Girls' Extension Work in the Northern and Western States. Pp. 39, figs. 24. Contribution from the States Relations Service. June, 1917. (Farmers' Bulletin 839.)

For general distribution.

Drying Fruits and Vegetables in the Home, With Recipes for Cooking. Pp. 29, figs. 20. June, 1917. (Farmers' Bulletin 841.)

For general distribution.

Management of Common Storage Houses for Apples in the Pacific Northwest. By H. J. Ramsey, Pomologist in Charge of Fruit Handling and Storage Investigations, and S. J. Dennis, Refrigeration Technologist, Office of Horticultural and Pomological Investigations. Pp. 23, figs. 4. Joint Contribution from the Bureau of Plant Industry and the Office of Markets and Rural Organization. June, 1917. (**Farmers' Bulletin 852.**)

Deals with the fundamentals of construction and the efficient management of common storage houses for apples under the conditions prevailing in Washington, Oregon, Idaho, and Montana.

Home Canning of Fruits and Vegetables as Taught to Canning Club Members in the Southern States. By Mary E. Cresswell and Ola Powell, Assistants in Home Demonstration Work, Office of Extension Work in the South. Pp. 42, figs. 17. Contribution from the States Relations Service. June, 1917. (**Farmers' Bulletin 853.**)

Especially suitable for distribution in the Southern States.

DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Pine Trees of the Rocky Mountain Region. By George B. Sudworth, Dendrologist. Pp. 47, pls. 28, maps 14. Contribution from the Forest Service. (Professional Paper.) May 26, 1917. (**Department Bulletin 460.**) Price, 30 cents.

Describes and illustrates all of the pine trees that inhabit the Rocky Mountain region, and discusses their forest habits.

Nursery Practice on the National Forests. By C. R. Tillotson, Forest Examiner. Pp. 86, pls. 22. Contribution from the Forest Service. (Professional Paper.) May 31, 1917. (**Department Bulletin 479.**) Price, 25 cents.

Should prove of interest and value to all who are engaged in nursery work with forest trees.

Solid-Stream Spraying Against the Gipsy Moth and the Brown-Tail Moth in New England. By L. H. Worthley, Agent in Charge of Scouting and Extermination Work, Gipsy and Brown-Tail Moth Investigations. Pp. 16, pls. 16. Contribution from the Bureau of Entomology. June 30, 1917. (**Department Bulletin 480.**) Price, 15 cents.

A description of this method of destroying the moths and a summary of the results obtained.

The Melon Fly in Hawaii. By E. A. Back, Entomologist, and C. E. Pemberton, Scientific Assistant, Mediterranean and other Fruit Fly Investigations. Pp. 64, pls. 24, figs. 10. Contribution from the Bureau of Entomology. (Professional Paper.) June 30, 1917. (**Department Bulletin 491.**) Price, 25 cents.

Describes life history, habits, method of spread and measures for control of this insect.

A System of Accounts for Cotton Warehouses. By Roy L. Newton, Assistant in Warehouse Investigations, and John R. Humphrey, Investigator in Market Business Practice. Pp. 31. Contribution from the Office of Markets and Rural Organization. June 26, 1917. (**Department Bulletin 520.**) Price, 5 cents.

Should be of special interest to all cotton warehousemen and of general interest to their patrons and to those who are concerned in the reliability of warehouse receipts.

Characteristics and Quality of Montana-Grown Wheat. By Levi M. Thomas, Assistant in Grain Standardization. Pp. 34, pls. 2, figs. 17. Contribution from the Bureau of Plant Industry and the Office of Markets and Rural Organization. May 18, 1917. (**Department Bulletin 522.**) Price, 10 cents.

Is intended for farmers in Montana and adjoining States and for grain buyers throughout the country.

Utilization of Ash. By W. D. Sterrett, Forest Examiner. Pp. 52, pls. 10, figs. 3. Contribution from the Forest Service. (Professional Paper.) June 29, 1917. (Department Bulletin 523.) Price, 15 cents.

Of especial interest to manufacturers of wood products.

Apple Blotch and Its Control. By John W. Roberts, Pathologist, Fruit-Disease Investigations. Pp. 11, pls. 2, figs. 3. Contribution from the Bureau of Plant Industry. (Professional Paper.) June 28, 1917. (Department Bulletin 534.) Price, 5 cents.

Is of interests to plant pathologist and to the apple growers of the eastern half of the United States, especially those of the more southerly apple-growing sections.

The Horse-Radish Flea-Beetle: Its Life History and Distribution. By F. H. Chittenden, Entomologist in Charge of Truck Crop and Stored Product Insect Investigations, and Neale F. Howard, Specialist. Pp. 16, figs. 6. Contribution from the Bureau of Entomology. June 28, 1917. (Department Bulletin 535.) Price, 5 cents.

For general distribution.

Shrimp: Handling, Transportation, and Uses. By Ernest D. Clark, Investigator in Fish and Fish Products, and Leslie MacNaughton, formerly Assistant in Fish Investigations. Pp. 8, pls. 2. Contribution from the Bureau of Chemistry. June 27, 1917. (Department Bulletin 538.) Price, 5 cents.

Contains suggestions for the proper care and preparation of shrimp for the market.

Effect of Fall Irrigation on Crop Yields at Bellefourche, South Dakota. By F. D. Farrell, Agriculturist in Charge of Demonstrations on Reclamations Projects, and Beyer Aune, Farm Superintendent, Western Irrigation Agriculture. Pp. 15, fig. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) June 27, 1917. (Department Bulletin 546.) Price, 5 cents.

Of interest to farmers in the semi-arid regions.

Variation in the Chemical Composition of Soils. By W. O. Robinson, L. A. Steinkoenig, and William H. Fry, Scientists in Chemical Investigations. Pp. 16. Contribution from the Bureau of Soils. June 26, 1917. (Department Bulletin 551.) Price, 5 cents.

A complete analyses of 45 samples of soil representing four soil provinces. Of interest to chemists engaged in soil investigations.

The Determination of Bacteria in Ice Cream. By S. Henry Ayers and W. T. Johnson, Jr., of the Dairy Division. Pp. 16. Contribution from the Bureau of Animal Industry. (Professional Paper.) June 19, 1917. (Department Bulletin 563.) Price, 5 cents.

Of interest to chemists and food officials generally.

The European Earwig and Its Control. By D. W. Jones, Scientific Assistant. Pp. 12, figs. 8. Contribution from the Bureau of Entomology. June 18, 1917. (Department Bulletin 566.) Price, 5 cents.

A description of this insect, and suggested means of control. *No copies available for free distribution.*

The Sanitary Control of Tomato-Canning Factories. By Burton J. Howard, Microscopist in Charge, in collaboration with Charles H. Stephenson, Scientific Assistant, Microchemical Laboratory. Pp. 29, pls. 2, figs. 3. Contribution from the Bureau of Chemistry. June 25, 1917. (Department Bulletin 569.) Price, 5 cents.

Of interest to canners and food officials generally.

MISCELLANEOUS.

Yearbook of the U. S. Department of Agriculture, 1916. Pp. 783, pls. 95, figs. 74. Price, \$1.00.

This Yearbook contains the annual report of the Secretary, 61 pages; 33 miscellaneous articles, 494 pages; an appendix, 188 pages; an index, 40 pages. Only 6 out of each 100 copies are allotted to this department, which number is insufficient to supply even its regular correspondents. Other applicants are therefore respectfully referred to their Representative or Delegate in Congress, as the other 94 per cent is allotted to that body. The Superintendent of Documents, Government Printing Office, Washington, D. C., has it for sale at \$1.00 per copy.

Effect of Different Methods of Transplanting Coffee. By T. B. McClelland, Assistant Horticulturist. Pp. 11, pl. 1. June 29, 1917. (Bulletin No. 22, Porto Rico Agricultural Experiment Station.) Price, 5 cents.

Automobile Registrations, Licenses, and Revenues in the United States, 1916. Pp. 15. Prepared by the Division of Road Economics, Office of Public Roads and Rural Engineering. June 21, 1917. (Circular No. 73, Office of the Secretary.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 9, No. 10. June 4, 1917. Contents: The Pink Bollworm, *Pectinophora gossypiella*. (ij K-52.) By August Busck. Pp. 343-370, pls. 6, figs. 7. Price, 15 cents.

Same, Vol. 9, No. 11. June 11, 1917. Contents: Toxicity of Various Benzene Derivatives to Insects. (ie Minn.-15.) By William Moore.—Hybrids of *Zea ramosa* and *Zea tunicata*. (ig G-113.) By G. N. Collins.—*Eupatorium ageratoides*, the Cause of Trembles. (ih N. C.-6.) By R. S. Curtis and Frederick A. Wolf. Pp. 371-404, pls. 12, figs. 4. Price, 20 cents.

Same, Vol. 9, No. 12. June 18, 1917. Contents: A Study of Methods of Estimation of Metabolic Nitrogen. (il Ohio-2.) By E. B. Forbes, C. E. Mangels, and L. E. Morgan.—A New Strain of *Rhizoctonia solani* on the Potato. (jb G-114.) By J. Rosenbaum and M. Shapovalov.—A Form of Potato Disease Produced by *Rhizoctonia*. (ik Me.-10.) By Glen B. Ramsey. Pp. 405-426, pls. 6, figs. 3. Price, 15 cents.

NOTE.—Beginning with Volume 5, The Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. XXXVI, No. 7, May, 1917. E. W. Allen, Ph. D., Editor. Pp. 601-700. Price, 15 cents.

Same, Vol. XXXVI, No. 8, June, 1917. Pp. 701-800. Price, 15 cents.

Same, Vol. XXXVI, No. 9. Abstract Number. Pp. 801-900. June 30, 1917. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 3, No. 6, June, 1917. Pp. 45-56. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 120. April, 1917. Pp. 39-46. June 5, 1917. Price, 5 cents.

Bureau of Chemistry. Supplement No. 25. [N. J. 4701-4750.] Pp. 261-320. June 20, 1917. Price, 10 cents.

Bureau of Chemistry. Supplement No. 26. [N. J. 4751-4800.] Pp. 321-374. June 13, 1917. Price, 10 cents.

Federal Horticultural Board. No. 39. April, 1917. Pp. 37-47. June 1, 1917. Price, 5 cents.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Clinton County, Iowa. By H. W. Hawker, of the U. S. Department of Agriculture, and F. B. Howe, of the Iowa Agricultural Experiment Station. Pp. 64, pls. 3, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Schoharie County, New York. By E. T. Maxon, of the U. S. Department of Agriculture, and G. L. Fuller, of the New York State College of Agriculture. Pp. 34, pls. 4, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Anson County, North Carolina. By E. S. Vanatta, of the U. S. Department of Agriculture, and F. N. McDowell, of the North Carolina Department of Agriculture. Pp. 65, pls. 7, figs. 2, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Fairfax and Alexandria Counties, Virginia. By William T. Carter, Jr., and C. K. Yingling, Jr. Pp. 43, pls. 4, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 3, March, 1917. [June 1, 1917.] Pp. 91-148, charts 9, figs. 11. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special articles: Solar and sky radiation measurements during March, 1917. By H. H. Kimball.—Hail in the United States. By A. J. Henry.—Lightning and forest fires in California. By A. H. Palmer.—Density of snow, with a note on disappearance and settling. By A. J. Henry and H. F. Alciatore.—Meteorological observations on United States lightships. By H. E. Williams.—Avalanche wind at Juneau, January 26, 1917. By M. B. Summers.—Tornado at Cincinnati, March 11, 1917. By W. C. Devereaux.—Tornadoes of March 11, 1917, in Montgomery County, Ohio. By R. F. Young.—Unusual hailstorm at Ballinger, Tex.—Severe local storm at San Diego, Cal., February, 1917.—Winter of 1916-17 at Greenwich, England.

National Weather and Crop Bulletin, Nos. 12, 13, 14, 15, June, 1917, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.

FOOD BULLETINS AND EMERGENCY CIRCULARS.

To aid the housewife to feed her family properly and economically and to conserve food from waste and spoilage, the department has issued Farmers' Bulletins Nos. 807, 808, 817, 824, 839, 841, and 853, and particular attention is invited to them.

FOOD THRIFT SERIES.

In addition to the bulletins, the department has published five pamphlets dealing with food thrift and giving latest information for the use of various foods and the making of desirable left-overs. These circulars contain many practical recipes which should be of direct interest to the housewife who wishes to help, through her household, in the national efforts to insure an adequate food supply. They will be supplied in answer to individual requests, and are especially suitable for distribution by those in charge of the many local organizations engaged in the food conservation campaign, and such officials are urged to write at once to the department for a supply to distribute in his or her locality. Ask for Food Thrift Series Nos. 1 to 5, and that your organization be listed for future numbers as issued.

WHEN JARS AND CANS ARE FULL
DRY REMAINING SURPLUS

Dry Surplus Fruits and Vegetables in Your Home

There is no difficulty about home drying fruits and vegetables. Sun drying of fruit was a common enough home industry a few years ago.

A few homemade shallow trays and a little mosquito netting are all you need for sun drying.

A few trays bent out of coarse wire netting and fitted like removable shelves into a lath frame are all you need to dry over your range or gas stove or before an electric fan.

Yes. There have been recent improvements in grandmother's successful method. It has been found that currents of air are better than heat in removing surplus water.

Water is all that is taken out; flavor, texture, and food value are not impaired. Soaking and cooking restore the succulent quality so important in the winter diet.

Dried products can be kept in paper containers.

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Revive This Home Industry in Your Home

U. S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

AUG 1 1917

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture.

WASHINGTON, *July 31, 1917.*

MONTHLY LIST OF PUBLICATIONS.

[JULY, 1917.]

HOW TO SECURE PUBLICATIONS.

✉ Send No Remittances to the U. S. Department of Agriculture.

A copy of any of the publications listed herein, including those with price named, except the Journal of Agricultural Research, Experiment Station Record, Service and Regulatory Announcements, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

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✉ Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

Remittances should be made to the Superintendent of Public Documents by coupons, postal money order, express order, or New York draft. Money inclosed in letter is sent at sender's risk.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

✉ NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Pit Silos. By T. Pryse Metcalfe and George A. Scott, Animal Husbandry Division. Pp. 14, figs. 6. Contribution from the Bureau of Animal Industry. June, 1917. (Farmers' Bulletin 825.)

Intended for distribution in sections where building materials are scarce and high priced, especially applying to the Great Plains region.

Sweet Clover: Harvesting and Thrashing the Seed Crop. By H. S. Coe, Assistant Agronomist, Office of Forage-Crop Investigations. Pp. 23, figs. 13. Contribution from the Bureau of Plant Industry. July, 1917. (Farmers' Bulletin 836.)

Discusses only the harvesting and thrashing of the sweet-clover seed crop. The growing of sweet clover and its utilization are discussed in Farmers' Bulletin 797, entitled "Sweet Clover: Growing the Crop," and Farmers' Bulletin 820, entitled "Sweet Clover: Utilization," respectively.

Farm Sheep Raising for Beginners. By F. R. Marshall and R. B. Millin, Animal Husbandry Division. Pp. 24, figs. 6. Contribution from the Bureau of Animal Industry. July, 1917. (Farmers' Bulletin 840.)

Suitable for general distribution.

Potato Storage and Storage Houses. By William Stuart, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 27, figs. 20. Contribution from the Bureau of Plant Industry. July, 1917. (Farmers' Bulletin 847.)

The investigations upon which this bulletin is based were made in the Irish Potato Investigations of the Office of Horticultural and Pomological Investigations in the Bureau of Plant Industry. The fruit and vegetable handling, transportation, and storage investigations of the Department of Agriculture are now prosecuted jointly and cooperatively by the Bureau of Plant Industry and the Office of Markets and Rural Organization. Of particular value throughout the northern half of the United States where potatoes are held in considerable quantities on the farm during the winter.

Fresh Fruits and Vegetables as Conservers of Other Staple Foods. By Caroline L. Hunt, Scientific Assistant, Office of Home Economics, States Relations Service. Pp. 11. Contribution from the States Relations Service. July, 1917. (Farmers' Bulletin 871.)

For general distribution.

DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Seasoning of Wood. By Harold S. Betts, M. E., in charge, Office of Industrial Investigations. Pp. 28, pls. 8, figs. 18. Contribution from the Forest Service. (Professional Paper.) July 9, 1917. (Department Bulletin 552.) Price, 10 cents.

A description of various methods of seasoning wood. Of interest to manufacturers of wood products.

Accounting Records for Country Creameries. By John R. Humphrey, Investigator in Market Business Practice, and G. A. Nashtoll, Assistant in Market Business Practice. Pp. 37. Contribution from the Office of Markets and Rural Organization. July 14, 1917. (Department Bulletin 559.) Price, 5 cents.

Intended for all farmers' cooperative and other country creameries throughout the United States. It contains copies of forms and a description of their uses for a system of accounts which is being recommended by the Office of Markets and Rural Organization and by the Dairy Division of the United States Department of Agriculture as a uniform system of accounting for country creameries.

Cost of Keeping Farm Horses and Cost of Horse Labor. A Study of Records for 316 Horses on 27 Farms in Illinois, Ohio, and New York. By M. R. Cooper, Scientific Assistant. Pp. 22, figs. 5. Contribution from the Office of Farm Management. July 9, 1917. (Department Bulletin 560.) Price, 5 cents.

Should be of value to all who are interested in the study of farm-management problems.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 10, No. 1. July 2, 1917. Contents: Life History of *Plutella maculipennis*, the Diamond-Back Moth. (im K-53.) By H. O. Marsh.—Daily Variation of Water and Dry Matter in the Leaves of Corn and the Sorghums. (in Kans.-6.) By Edwin C. Miller.—A Neglected Factor in the Use of Nicotine Sulphate as a Spray. (os Minn.-16.) By William Moore and Samuel A. Graham.—A New Disease of Wheat. (jj G-115.) By Erwin F. Smith. Pp. 1-53, pls. 8, figs. 10. Price, 20 cents.

Same, Vol. 10, No. 2. July 9, 1917. Contents: A Study of the Rate of Passage of Food Residues Through the Steer and its Influence on Digestion Coefficients. (ig Ga.-1.) By P. V. Ewing and F. H. Smith.—A Further Contribution to the Study of *Eriosoma pyricola*, the Woolly Pear Aphis. (is K-54.) By A. C. Baker and W. M. Davidson.—Micro-organisms and Heat Production in Silage Fermentation. (ip Kans. 7.) By O. W. Hunter.—Isolation of Cyanuric Acid from Soil. (iu G-116.) By Louis E. Wise and E. H. Waters.—Family Performance as a Basis for Selection in Sheep. (ir N. H.-3.) By E. G. Ritzman and C. B. Davenport.—A Needle Blight of Douglas Fir. (jb No-117.) By James R. Weir. Pp. 55-103, pls. 4, figs. 13. Price, 15 cents.

Same, Vol. 10, No. 3. July 16, 1917. Contents: A Substitute for Litmus for Use in Milk Cultures. (iy A-30.) By Wm. Mansfield Clark and Herbert A. Lubs.—Movement and Distribution of Moisture in the Soil. (ix Utah-7.) By F. S. Harris and H. W. Turpin. Pp. 105-155, figs. 31. Price, 15 cents.

Same, Vol. 10, No. 4. July 23, 1917. Contents: A Colletotrichum Leafspot of Turnips (it Ga.-2.) By B. B. Higgins.—Black Rootrot of the Apple. (iv Va. (Blacksburg)-1.) By F. D. Fromme and H. E. Thomas.—Physiological Effect on Growth and Reproduction of Rations Balanced from Restricted Sources. (iw Wis.-7.) By E. B. Hart, E. V. McCollum, H. Steenbock and G. C. Humphrey.—Toxic Values and Killing Efficiency of the Arsenates. (jh Oreg.-1.) By A. L. Lovett and R. H. Robinson. Pp. 157-207, pls. 20, fig. 1. Price, 30 cents.

Same, Vol. 10, No. 5. July 30, 1917. Contents: Evaporation from the Surfaces of Water and River-Bed Materials. (ja D-11.) By R. B. Sleight.—Influence of Grading on the Value of Fine Aggregate Used in Portland Cement Concrete Road Construction. (jb D-12.) By F. H. Jackson, jr. Pp. 209-274, pls. 6, figs. 12. Price, 25 cents.

NOTE.—Beginning with Volume 5, The Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

The Monthly Crop Report. Vol. 3, No. 7, July, 1917. Pp. 57-68. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals, especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 121. May, 1917. Pp. 47-59. July 3, 1917. Price, 5 cents.

Bureau of Chemistry. No. 20. Pp. 55-66. July 2, 1917. Price, 5 cents.

Federal Horticultural Board. No. 40, May, 1917. Pp. 49-56. July 7, 1917. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 4, April, 1917. [June 30, 1917.] Pp. 149-201, charts 9, figs. 25. Price, 25 cents per copy, \$2.50 per year.

Special Articles: Solar and sky radiation measurements during April, 1917. By H. H. Kimball.—Equation of horizontal rainbows. By K. Otobi.—Improved kite hygrometer and its records. By W. R. Gregg.—Some new instruments for oceanographical research. By Hans Pettersson.—Tornado of April 5, 1917, at Tampa, Fla. By W. J. Bennett.—Tornado of March 23, 1917, at New Albany, Ind. By F. J. Walz.—Fish killed by the cold wave of February 2-4, 1917, in Florida. By Ruy H. Finch.

National Weather and Crop Bulletin, Nos. 16, 17, 18, 19, 20, July, 1917, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.

THE point has been reached where war is waged by whole nations. Every man, woman, and child is involved and nearly every adult and most boys and girls can be efficient factors. We are in this war for the purpose of defending our rights, of making sure that, as a Nation, we shall be able to live the sort of life and to have the sort of institutions we desire, of making democracy persist in the world, and of safeguarding the world against the recurrence of such a war as this. To accomplish this the Nation must aim at the perfection of organization, and therefore each individual must recognize the necessity of making sacrifices for the common good and more than ever of working under limitations—of doing team work. Our people have a genius for organization, and they will not fail in the task they have assumed. Our farmers, on whom a great responsibility rests, are the most efficient farmers in the world when they do their best. They will not be found wanting in this crisis.

June 12, 1917.

D. F. Houston
Secretary of Agriculture.

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This circular will be sent regularly to all who apply for it.

United States Department of Agriculture.

WASHINGTON, August 31, 1917.

MONTHLY LIST OF PUBLICATIONS.


[AUGUST, 1917.]

HOW TO SECURE PUBLICATIONS.

 Send No Remittances to the U. S. Department of Agriculture.


A copy of any of the publications listed herein, including those with price named, except the Journal of Agricultural Research, Experiment Station Record, Service and Regulatory Announcements, and publications of the Weather Bureau, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply of the publications listed below is exhausted, those publications of which the price is indicated can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

 Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

Remittances should be made to the Superintendent of Public Documents by coupons, postal money order, express order, or New York draft. Money inclosed in letter is sent at sender's risk.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

 NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Classification of American Upland Cotton. By D. E. Earles, Specialist in Cotton Classing, and Fred Taylor, Cotton Technologist. Pp. 28, figs. 15. Contribution from the Office of Markets and Rural Organization. July, 1917. (Farmers' Bulletin 802.)

Suitable for cotton growers.

Organization, Financing, and Administration of Drainage Districts. By H. S. Yohe, Expert on Drainage Organization. Pp. 37. Contribution from the Office of Public Roads and Rural Engineering. June, 1917. (Farmers' Bulletin 815.)

Suitable for drainage districts.

How to Select Foods. (3) Foods Rich in Protein. By Caroline L. Hunt and Helen W. Atwater, Scientific Assistants, Office of Home Economics. Pp. 19, figs. 2. Contribution from the States Relations Service. July, 1917. (Farmers' Bulletin 824.)

For general distribution.

The Boll-Weevil Problem, with Special Reference to Means of Reducing Damage. By W. D. Hunter, In Charge of Southern Field Crop Insect Investigations. Pp. 40, figs. 6. Contribution from the Bureau of Entomology. August, 1917. (Farmers' Bulletin 848.)

Suitable for cotton growers in the boll-weevil districts.

Home Uses for Muscadine Grapes. By Charles Dearing, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 23, figs. 4. Contribution from the Bureau of Plant Industry. August, 1917. (Farmers' Bulletin 859.)

For general distribution.

Utilization of Farm Wastes in Feeding Live Stock. By S. H. Ray, Animal Husbandry Division. Pp. 12. Contribution from the Bureau of Animal Industry. August, 1917. (Farmers' Bulletin 873.)

Of special interest to those engaged in the feeding of live stock.

Home Storage of Vegetables. By James H. Beattie, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 22, figs. 20. Contribution from the Bureau of Plant Industry. August, 1917. (Farmers' Bulletin 879.)

Suitable for general distribution.

Preservation of Vegetables by Fermentation and Salting. By L. A. Round, Bacteriologist, Bureau of Chemistry, and H. L. Lang, Scientific Assistant, Office of Home Economics. Pp. 15, fig. 1. Contribution from the States Relations Service and Bureau of Chemistry. August, 1917. (Farmers' Bulletin 881.)

For general distribution.

Wheat Growing in the Southeastern States. By Clyde E. Leighty, Agronomist in Charge of Eastern Wheat Investigations. Pp. 14. Contribution from the Bureau of Plant Industry. August, 1917. (Farmers' Bulletin 885.)

For general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Genus *Calosoma*, Including Studies of Seasonal Histories, Habits, and Economic Importance of American Species North of Mexico and Several Introduced Species. By A. F. Burgess, In Charge of Gipsy Moth and Brown-Tail Moth Investigations, and C. W. Collins, Entomological Assistant. Pp. 124, pls. 9, figs. 5. Contribution from the Bureau of Entomology. (Professional Paper.) July 25, 1917. (Department Bulletin 417.) Price, 20 cents.

A First-Year Course in Home Economics for Southern Agricultural Schools. By Louise Stanley, Professor of Home Economics, University of Missouri. Pp. 58, figs. 2. Contribution from the States Relations Service. (Professional Paper.) July 27, 1917. (Department Bulletin 540.) Price, 10 cents.

This bulletin has been prepared in cooperation between the author and C. H. Lane, chief specialist in Agricultural Education, as well as specialist of the Office of Home Economics, States Relations Service. It is designed to aid teachers in presenting a course of study in home economics which will connect such instruction and actual home experiences.

The Pollination of the Mango. By Wilson Popenoe, Agricultural Explorer, Office of Foreign Seed and Plant Introduction. Pp. 20, pls. 4, figs. 1. Contribution from the Bureau of Plant Industry. (Professional Paper.) August 11, 1917. (Department Bulletin 542.) Price, 5 cents.

Control of Peach Bacterial Spot in Southern Orchards. By John W. Roberts, Pathologist, Fruit-Disease Investigations. Pp. 7, pl. 1. Contribution from the Bureau of Plant Industry. 1917. (Department Bulletin 543.) Price, 5 cents.

This bulletin is of interest to peach growers in the eastern half of the United States and particularly those of the more southerly parts of this section. It is also of interest to plant pathologists.

Control of the Grape-Berry Moth in the Erie-Chautauqua Grape Belt. By Dwight Isely, Scientific Assistant, Deciduous Fruit Insect Investigations. Pp. 44, pls. 6, figs. 9. Contribution from the Bureau of Entomology. August 9, 1917. (Department Bulletin 550.) Price, 10 cents.

This bulletin will be of interest to grape raisers in New York, Pennsylvania, Michigan and Ohio.

The Chicken Mite: Its Life History and Habits. By H. P. Wood, Entomological Assistant, Insects Affecting Health of Animals, Bureau of Entomology. Pp. 14, pls. 1, figs. 2. Contribution from the Bureau of Entomology. August 10, 1917. (Department Bulletin 553.) Price, 5 cents.

Marketing Grain at Country Points. By George Livingston and K. B. Seeds, Specialists in Grain Marketing. Pp. 45, figs. 3. Contribution from the Office of Markets and Rural Organization. July 28, 1917. (Department Bulletin 558.) Price, 5 cents.

This bulletin should be of interest to producers, shippers, dealers, and consumers of grain and grain products throughout the United States.

The Presence of Arsenic in Hops. By W. W. Stockberger, Physiologist in charge of Drug-Plant and Poisonous-Plant Investigations, Bureau of Plant Industry, and W. D. Collins, Food Investigation, Chemist, Bureau of Chemistry. Pp. 7. Joint contribution from the Bureau of Plant Industry and Bureau of Chemistry. August 8, 1917. (Department Bulletin 568.) Price, 5 cents.

This bulletin shows the sources of arsenic in certain samples of dried hops.

The By-Products of Rice Milling. By J. B. Reed, Assistant Chemist, Miscellaneous Laboratory, and F. W. Liepsner, Chemist in charge New Orleans Food and Drug Inspection Laboratory. Pp. 16, fig. 1. Contribution from the Bureau of Chemistry. August 11, 1917. (Department Bulletin 570.) Price, 5 cents.

The Sheep Industry on the Minidoka Reclamation Project. By E. F. Rinehart, Agriculturist, Demonstrations on Reclamation Projects, Bureau of Plant Industry. Pp. 28, fig. 7. Contribution from the Bureau of Plant Industry. August 4, 1917. (Department Bulletin 573.) Price, 5 cents.

The suggestions made in this bulletin, while based primarily on the results of observations on the Minidoka Reclamation Project, are applicable to several other irrigation projects in the northwestern United States having similar climatic and agricultural conditions.

MISCELLANEOUS.

Rules and Regulations for Carrying out the Provisions of the Insecticide Act of 1910. Pp. 15. August 24, 1917. (Circular 34, Office of Secretary.) Second revision. Price, 5 cents.

Food Needs for 1918. Agricultural Program for the Period Beginning with the Autumn of 1917. Pp. 14. August 16, 1917. (Circular 75, Office of Secretary.) Price, 5 cents.

The Litchi in Hawaii. By J. E. Higgins, Horticulturist. Pp. 21, pls. 5. July 27, 1917. (Bulletin No. 44, Hawaii Agricultural Experiment Station.) Price, 10 cents.

Directory of Officials and Organizations Concerned with the Protection of Birds and Game, 1917. Pp. 17. August 3, 1917. (Doc. 108, Bureau of Biological Survey.) Price, 5 cents.

Distribution and Utilization of the Garden Surplus. Pp. 10. August 24, 1917. (Document No. 6, Bureau of Markets.)

Federal Legislation, Regulations, and Rulings Affecting Agricultural Colleges and Experiment Stations. Revised to July 15, 1917. Pp. 56. States Relations Service. August 25, 1917. Price, 5 cents.

REPORT.

Report of the Guam Agricultural Experiment Station, 1916. Pp. 58, pls. 10, figs. 5. Price, 10 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 10, No. 6. August 6, 1917. Contents: Chemical Studies in Making Alfalfa Silage. (iz Kans.-8.) By C. O. Swanson and E. L. Tague.—Studies on Oat Breeding—V: The F₁ and F₂ Generations of a Cross Between a Naked and a Hulled Oat. (jd Me-11.) By Jacob Zinn and Frank M. Surface.—Two New Cambium Miners (Diptera). (je K-55.) By Charles T. Greene. Pp. 275-318, pls. 10. Price, 20 cents.

Same, Vol. 10, No. 7. August 13, 1917. Contents: Toughness of Bituminous Aggregates. (jf D.-13.) By Charles S. Reeve and Richard H. Lewis.—Origin of Alkali. (jg Utah-.) By Robert Stewart and William Peterson.—Effect of Paraffin on the Accumulation of Ammonia and Nitrates in the Soil. (ji Kans.-9.) By P. L. Gainey.—Volatility of Organic Compounds as an Index of the Toxicity of Their Vapors to Insects. (jk Minn.-7.) By William Moore. Pp. 318-371, pls. 2, figs. 7. Price, 15 cents.

Same, Vol. 10, No. 8. August 20, 1917. Contents: The Cyclamen Mite. (jl Oreg.-2.) By G. F. Moznette.—Relation of Movement of Water in a Soil to Its Hygroscopicity and Initial Moistness. (jm Minn.-18.) By Frederick J. Alway and Guy R. McDole. Pp. 373-428, pls. 2, figs. 8. Price, 15 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 37, No. 1. July, 1917. E. W. Allen, Ph. D., Editor. Pp. 1-100. Price, 15 cents.

Same, Vol. 37, No. 2. August, 1917. Pp. 101-200. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report, Vol. 3, No. 8. August, 1917. Pp. 69-80. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stock. For free distribution.

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Bureau of Animal Industry. No. 122. June, 1917. Pp. 61-79. August 13, 1917. Price, 5 cents.

Insecticide and Fungicide Board. No. 16. Pp. 227-294. August 8, 1917. Price, 5 cents.

Federal Horticultural Board. No. 41. June, 1917. Pp. 57-77. August 2, 1917. Price, 5 cents.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Barbour County, Alabama. By Howard C. Smith, of the U. S. Department of Agriculture, and N. Eric Bell and J. F. Stroud, of the Alabama Department of Agriculture and Industries. Pp. 50, fig. 1, map. (From *F. O. Soils, 1914.*) Price, 15 cents.

Soil Survey of the Healdsburg Area, California. By E. B. Watson, of the U. S. Department of Agriculture, and Walter C. Dean, C. J. Zinn, and R. L. Pendleton, of the University of California. Pp. 59, pls. 5, fig. 1. Map. (From *F. O. Soils, 1915.*) Price, 15 cents.

Soil Survey of Cumberland County, Me. By Cornelius Van Duyne, In Charge, and M. W. Beck. Pp. 92. Map. (From *F. O. Soils, 1915.*) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 5. May, 1917. Pp. 203-266, charts 9, figs. 20. Price, 25 cents.

Special articles: Solar and sky radiation during May, 1917. By H. H. Kimball.—City smoke and daylight illumination intensities. By H. H. Kimball and A. H. Thiessen.—On horizontal halos. By Y. Tsuiji.—Solar halo at Vicksburg, Miss., April 24, 1917. By W. E. Barron.—Halo phenomena, April 8, 1917, at York, N. Y.—Summer types of rainfall in the upper Pecos Valley. By C. Hallenbeck.—Showers of organic matter. By W. L. McAtee.—Records at the Abbe Meteorological Observatory compared with those at the Government building, Cincinnati. By W. C. Devereaux.—Winter indoor aridity in Topeka, Kans. By S. D. Flora.—Preparation of precipitation charts. By W. G. Reed and J. B. Kincer.—New instruments for oceanographical research. Supplement note.—Hail squall of May 1, 1917, and accompanying weather at Baltimore, Md. By L. K. Hirshberg.—Photographs of the Antler, N. Dak., tornado of August 20, 1911. By H. E. Simpson.—Some researches in the Far Eastern seasonal correlations. (Second note.) By T. Okada.—Forecasts and warnings for May, 1917. By H. C. Frankenfield.—Rivers and floods during May, 1917. By A. J. Henry.—Great Lakes level during May, 1917.

Climatological Data for the United States, by sections. Vol. 4, No. 4. April, 1917. Pp. 117, maps 2. Price, 35 cents, \$4 a year.

Monthly Weather Review. (For sale only.) Supplement No. 7. Aerology No. 3. August 22, 1917. Pp. 51, figs. 4. Price, 25 cents.

Contents: Free-Air Data at Drexel Aerological Station, April, May, and June, 1916. By William R. Blair and others. Washington, 1917.

National Weather and Crop Bulletin, Nos. 21, 22, 23, 24, August, 1917, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., *September 29, 1917.*

MONTHLY LIST OF PUBLICATIONS.

[SEPTEMBER, 1917.]

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

The Red Spider on Cotton and How to Control It. By E. A. McGregor, Scientific Assistant, Southern Field Crop Insect Investigations. Pp. 15, figs. 12. Contribution from the Bureau of Entomology. August, 1917. (Farmers' Bulletin 831.)

This bulletin is a revision of Farmers' Bulletin 735, and is of interest to cotton growers generally.

Trapping Moles and Utilizing Their Skins, With Special Reference to the Pacific Coast States. By Theo. H. Scheffer, Assistant Biologist. Pp. 14, figs. 11. Contribution from the Bureau of Biological Survey. September, 1917. (Farmers' Bulletin 832.)

Suitable for general distribution.

Methods of Controlling or Eradicating the Wild Oat in the Hard Spring-Wheat Area. By H. R. Cates, Scientific Assistant, Office of Forage Crop Investigations. Pp. 16, figs. 9. Contribution from the Bureau of Plant Industry. July, 1917. (Farmers' Bulletin 833.)

Especially applicable to conditions in North Dakota, South Dakota, and Minnesota.

Hog Cholera: Prevention and Treatment. By M. Dorset, Chief of the Biochemic Division, and O. B. Hess, In Charge of Hog-Cholera Control. Pp. 32, figs. 12. Contribution from the Bureau of Animal Industry. August, 1917. (Farmers' Bulletin 834.)

For general distribution.

Modern Methods of Protection Against Lightning. By Roy N. Covert. Pp. 31, figs. 23. Contribution from the Weather Bureau. August, 1917. (Farmers' Bulletin 842.)

Supersedes Farmers' Bulletin 367. Suitable for general distribution.

How to Attract Birds in the Middle Atlantic States. By W. L. McAtee, Assistant Biologist. Pp. 15, figs. 11. Contribution from the Bureau of Biological Survey. September, 1917. (Farmers' Bulletin 844.)

For distribution in New Jersey, Pennsylvania, Delaware, Virginia, West Virginia, and North Carolina.

How to Make Cottage Cheese on the Farm. By K. J. Matheson and F. R. Cammack, of the Dairy Division. Pp. 14, figs. 7. Contribution from the Bureau of Animal Industry. August, 1917. (Farmers' Bulletin 850.)

For general distribution.

The House Fly. By L. O. Howard, Chief Bureau of Entomology, and R. H. Hutchinson, Scientific Assistant. Pp. 23, figs. 15. Contribution from the Bureau of Entomology. August, 1917. (Farmers' Bulletin 851.)

Supersedes Farmers' Bulletin 679, and is for general distribution.

The Guinea Fowl. By Andrew S. Weiant, Scientific Assistant in Poultry Investigations, Animal Husbandry Division. Pp. 15, figs. 4. Contribution from the Bureau of Animal Industry. August, 1917. (Farmers' Bulletin 858.)

Supersedes Farmers' Bulletin 234. Suitable for general distribution.

Removal of Stains from Clothing and Other Textiles. By Harold L. Lang and Anna H. Whittelsey, Scientific Assistants, Office of Home Economics. Pp. 35, figs. 3. Contribution from the States Relations Service. September, 1917. (Farmers' Bulletin 861.)

Suitable for general distribution.

The Common Mealybug and Its Control in California. By R. S. Woglum and J. D. Neuls, Entomological Assistants, Investigations of Insects Affecting Tropical and Subtropical Fruits. Pp. 16, figs. 4. Contribution from the Bureau of Entomology. September, 1917. (Farmers' Bulletin 862.)

Of interest to citrus fruit growers in California.

How to Increase the Potato Crop by Spraying. By F. H. Chittenden, Entomologist in Charge of Truck Crop Insect Investigations, and W. A. Orton, Pathologist in Charge of Cotton, Truck, and Forage Crop Disease Investigations. Pp. 22, figs. 22. Contribution from the Bureau of Entomology and the Bureau of Plant Industry. September, 1917. (Farmers' Bulletin 863.)

Describes various insects and diseases affecting the potato and suggests means of control.

Tobacco Hornworm Insecticide: Recommendations for Use of Powdered Arsenate of Lead in Dark-Tobacco District. By A. C. Morgan, Entomologist, Southern Field Crop Insect Investigations. Pp. 10. Contribution from the Bureau of Entomology. August, 1917. (Farmers' Bulletin 867.)

Supersedes Farmers' Bulletin 595. Of especial interest to tobacco growers in Tennessee and Kentucky.

Saving Vegetable Seeds for the Home and Market Garden. By W. W. Tracy, sr., Superintendent of Testing Grounds, Horticultural and Pomological Investigations. Pp. 16, figs. 5. Contribution from the Bureau of Plant Industry. September, 1917. (Farmers' Bulletin 884.)

Suggests methods of labeling, fumigating, and storing vegetable seeds. For general distribution.

Harvesting Soy Bean Seed. By W. J. Morse, Scientific Assistant, Office of Forage-Crop Investigations. Pp. 8, figs. 7. Contribution from the Bureau of Plant Industry. September, 1917. (Farmers' Bulletin 886.)

Suitable for general distribution.

Growing Winter Wheat on the Great Plains. By E. C. Chilcott, Agriculturist in Charge, and John S. Cole, Agriculturist, Office of Dry-Land Agriculture. Pp. 12. Contribution from the Bureau of Plant Industry. September, 1917. (Farmers' Bulletin 895.)

Is intended to answer the requests for information on the production of winter wheat on the Great Plains under dry-farming conditions that arise from the stimulus of a present and prospective price much higher than that under which the agriculture of the section has been developed and from the campaign for a large increase in the crop to meet the necessities of war conditions.

Homemade Fruit Butters. By C. P. Close, Pomologist, Office of Horticultural and Pomological Investigations. Pp. 7. Contribution from the Bureau of Plant Industry. September, 1917. (Farmers' Bulletin 900.)

Contains instructions for making apple, pear, peach, plum, and garfield butter. For general distribution.

DEPARTMENT BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

Some Exercises in Farm Handicraft for Rural Schools. By H. O. Sampson, Assistant in Agricultural Education. Pp. 38, figs. 41. Contribution from the States Relations Service. (Professional Paper.) July 26, 1917. (Department Bulletin 527.) Price, 10 cents.

Furnishes elementary lessons in farm mechanics and is of interest to teachers and pupils of rural schools in all parts of the United States.

The Lesser Corn Stalk-Borer. By Philip Luginbill and Geo. G. Ainslie, Entomological Assistants, Cereal and Forage Insect Investigations. Pp. 27, pls. 3, figs. 6. Contribution from the Bureau of Entomology. (Professional Paper.) September 8, 1917. (Department Bulletin 539.) Price, 5 cents.

Of especial interest to corn growers in the Southern States.

Cooperative Purchasing and Marketing Organizations Among Farmers in the United States. By O. B. Jesness, Assistant in Cooperative Organization, and W. H. Kerr, Investigator in Market Business Practice. Pp. 82, pls. 4, charts 11. Contribution from the Office of Markets and Rural Organization. September 19, 1917. (Department Bulletin 547.) Price, 20 cents.

Gives the history and growth of cooperative organization, cooperative laws, and financing and business practices.

The Cranberry Girdler. By H. B. Seammell, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 20, pls. 7. Contribution from the Bureau of Entomology. September 21, 1917. (Department Bulletin 554.) Price, 10 cents.

Describes the distribution, life history, and habits of this insect, and suggests means of control.

Mechanical Properties of Woods Grown in the United States. By J. A. Newlin, in Charge of Timber Tests, and Thomas R. C. Wilson, Engineer in Forest Products. Pp. 47, pls. 3. Contribution from the Forest Service. (Professional Paper.) September 15, 1917. (Department Bulletin 556.) Price, 10 cents.

Of interest to engineers and builders generally.

Feed Cost of Egg Production. Results of Three Years Experiments at the Government Poultry Farm. By Harry M. Lamon and Alfred R. Lee, of the Animal Husbandry Division. Pp. 42, pls. 8, figs. 3. Contribution from the Bureau of Animal Industry. August 18, 1917. (Department Bulletin 561.) Price, 10 cents.

For general distribution.

The Control of Tobacco Wilt in the Flue-Cured District. By W. W. Garner, Physiologist in Charge of Tobacco Investigations, Bureau of Plant Industry; F. A. Wolf, Plant Pathologist and Bacteriologist, North Carolina Agricultural Experiment Station; and E. G. Moss, Assistant in Tobacco Investigations in the Bureau of Plant Industry and Collaborator of the North Carolina Agricultural Experiment Station. Pp. 19, figs. 5. Contribution from the Bureau of Plant Industry. (Professional Paper.) September 15, 1917. (Department Bulletin 562.) Price, 5 cents.

This bulletin presents the results of investigations conducted jointly by the North Carolina Agricultural Experiment Station and the Bureau of Plant Industry for the purpose of working out practical methods for the control of tobacco wilt.

The Conversion of the Weights of Mechanical Separations of Corn, Wheat, and Other Grains into Percentages. By E. G. Boerner, Grain Supervisor. Pp. 22, figs. 2. Contribution from the Bureau of Plant Industry and the Bureau of Markets. September 28, 1917. (Department Bulletin 574.) Price, 5 cents.

For use of officials and others interested in the enforcement of the United States grain standard act.

The Manufacture of Cottage Cheese in Creameries and Milk Plants. By Arnold O. Dahlberg, of the Dairy Division. Pp. 16, figs. 8. Contribution from the Bureau of Animal Industry. September 27, 1917. (Department Bulletin 576.) Price, 5 cents.

Describes methods of manufacture, and gives costs and markets and prices.

Experiments in the Control of Potato Leak. By Lon A. Hawkins, Plant Physiologist, Plant Physiological and Fermentation Investigations. Pp. 5. Contribution from the Bureau of Plant Industry. (Professional Paper.) September 14, 1917. (Department Bulletin 577.) Price, 5 cents.

Of interest to potato growers and shippers generally.

Celery Storage Experiments. By H. C. Thompson, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 26, figs. 10. Contribution from the Bureau of Plant Industry and the Bureau of Markets. September 5, 1917. (Department Bulletin 579.) Price, 5 cents.

Of interest to truck growers and managers of storage houses.

The Handling and Storage of Apples in the Pacific Northwest. By H. J. Ramsey, Pomologist in Charge, Fruit Handling and Storage Investigations; A. W. McKay, formerly Pomologist; E. L. Markell and H. S. Bird, formerly Scientific Assistants, Office of Horticultural and Pomological Investigations. Pp. 32, pls. 7. Contribution from the Bureau of Plant Industry and the Bureau of Markets. September 8, 1917. (Department Bulletin 587.) Price, 15 cents.

Of interest to apple growers generally.

MISCELLANEOUS.

The Substitution of Other Materials for Wood. Studies of the Lumber Industry, Part XI. By Rolf Thelen, Engineer in Forest Products. Pp. 78, figs. 26. Contribution from the Forest Service. September, 1917. (Report 117, Office of the Secretary.) Price, 15 cents.

State Highway Mileage and Expenditures for the Calendar Year 1916. Pp. 8. Prepared by the Division of Economics, Office of Public Roads and Rural Engineering. September 24, 1917. (Circular 74, Office of the Secretary.) Price, 5 cents.

Rules and Regulations of the Secretary of Agriculture under the United States Standard Container Act of August 31, 1917. (Circular 76, Office of the Secretary.) Price, 5 cents.

The Work of the Belle Fourche Reclamation Project Experiment Farm in 1916. By Beyer Aune, Farm Superintendent. Pp. 28, figs. 3. September 22, 1917. (W. A. I. Doc. 14, Bureau of Plant Industry.) Price, 5 cents.

The Work of the Huntley Reclamation Project Experiment Farm in 1916. By Dan Hansen, Farm Superintendent. Pp. 25, figs. 5. (W. A. I. Doc. 15, Bureau of Plant Industry.) Price, 5 cents.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period from Jan. 1 to Mar. 31, 1914. (Nos. 36937-37646.) Pp. 105, pls. 10. August 17, 1917. (Inventory No. 38, Bureau of Plant Industry.) Price, 10 cents.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period from April 1 to June 30, 1914. (Nos. 37647-38665.) Pp. 183, pls. 10. September 15, 1917. (Inventory No. 39, Bureau of Plant Industry.) Price, 25 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol 10, No. 9, August 27, 1917. Contents: Biologic Forms of Puccinia graminis on Cereals and Grasses. (ju Minn.-19.) By E. C. Stakman and F. J. Piemeisel. Pp. 429-496, pls. 7. Price, 25 cents.

Same, Vol. 10, No. 10. September 3, 1917. Contents: Quassia Extract as a Contact Insecticide. (jp K56.) By N. E. McIndoo and A. F. Sievers.—A Nursery Blight of Cedars. (jq G-118.) By Glen G. Hahn, Carl Hartley, and Roy G. Pierce. Pp. 497-540, pls. 2, figs. 3. Price, 15 cents.

Same, Vol. 10, No. 11. September 10, 1917. Contents: Formation of "Black Alkali" (Sodium Carbonate) in Calcareous Soils. (jo G-119.) By J. F. Breazeale. Pp. 541-590, pl. 1, figs. 26. Price, 15 cents.

Same, Vol. 10, No. 12. September 17, 1917. Contents: Effect of Three Annual Applications of Boron on Wheat. (js E-6.) By F. C. Cook and J. B. Wilson.—Energy Values of Hominy Feed and Maize Meal for Cattle. (jt Pa.-2.) By Henry Prentiss Armsby and J. August Fries.—Further Studies of the Mosaic Disease of Tobacco. (ju G-120.) By H. A. Allard.—Study of the Proteins of Certain Insects with Reference to Their Value as Food for Poultry. (jv Ky.-4.) By J. S. McHargue.—Wind-Blown Rain, a Factor in Disease Dissemination. (jw S. C.-2.) By R. C. Faulwetter. Pp. 591-648, pl. 1, fig. 1. Price, 15 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 37, No. 3, Abstract Number. E. W. Allen, Ph. D., Editor. Pp. 201-300. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchange. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report, Vol. 3, No. 9, September, 1917. Pp. 81-92. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

NOTE.—These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Animal Industry. No. 123. July, 1917. Pp. 81-88. August 31, 1917. Price, 5 cents.

Bureau of Chemistry. Supplement No. 27. [N. J. 4801-4850.] Pp. 375-478. September 18, 1917. Price, 10 cents.

Federal Horticultural Board. No. 42. July, 1917. Pp. 79-102. August 30, 1917. Price, 5 cents.

Bureau of Markets. No. 24. Supervision Districts under the United States Grain Standards Act. Pp. 40, fig. 1. September 8, 1917. Price, 5 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

NOTE.—Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 6. June, 1917. [August 31, 1917.] Pp. 267-336, charts 9, figs. 34. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation during June, 1917. By H. H. Kimball.—Peculiar streak in line with kite wire. By B. J. Sherry.—World's air routes and their regulation.—New England snowfall. By C. F. Brooks.—Cold spring of 1917. By P. C. Day.—Some aspects of the cold period December, 1916, to April, 1917. By R. C. Mossmann.—Accidental pressure variations in the United States. By A. J. Henry.—Tornadoes and windstorms of May 25-June 6, 1917. By H. C. Frankenhfield.—Meteorological courses for aeronautical engineers: Syllabus of 10 lectures. By R. DeC. Ward.—Some researches in the Far Eastern seasonal correlations. By T. Okada.—Effect of humidification of school rooms on intellectual progress of the pupils. By Edward L. Thorndike and Paul J. Kruse.

National Weather and Crop Bulletin, Nos. 25, 26, 27, 28, 1917, reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture.

WASHINGTON, D. C., October 31, 1917.

MONTHLY LIST OF PUBLICATIONS.

[OCTOBER, 1917.]

READ CAREFULLY BEFORE ORDERING.

Send No Remittances to the U. S. Department of Agriculture.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

SPECIAL NOTICE.

Before mailing your request be sure and see that your name and complete post-office address (street number or rural route number as the case may be) is attached.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Winter Oats for the South. By C. W. Warburton, Agronomist in Charge of Oat Investigations. Pp. 16, figs. 2. Contribution from the Bureau of Plant Industry. Revised October, 1917. (**Farmers' Bulletin 436.**)

For general distribution in the Southern States.

Construction and Use of Farm Weirs. By Victor M. Cone, Irrigation Engineer, Irrigation Investigations. Pp. 19, figs. 5. Contribution from the Office of Public Roads and Rural Engineering. (**Farmers' Bulletin 813.**)

Gives practical directions for the construction and use of the smaller sizes of weirs, such as are suited to the measurement of water on irrigated farms.

Farm Reservoirs. By Samuel Fortier, Chief of Irrigation Investigations. Pp. 36, figs. 31. Contribution from the Office of Public Roads and Rural Engineering. (**Farmers' Bulletin 828.**)

Gives practical information to those who intend to build, or are operating farm reservoirs.

Asparagus. By H. C. Thompson, Horticulturist, Office of Horticultural and Pomological Investigations. Pp. 20, figs. 10. Contribution from the Bureau of Plant Industry. (Farmers' Bulletin 829.)

For general distribution.

Marketing Eggs by Parcel Post. By Lewis B. Flohr, Investigator in Marketing by Parcel Post. Pp. 23, figs. 6. Contribution from the Bureau of Markets. (Farmers' Bulletin 830.)

A revision of Farmers' Bulletin 594, Shipping Eggs by Parcel Post, and is suitable for general distribution.

The Asparagus Beetles and Their Control. By F. H. Chittenden, Entomologist in Charge of Truck Crop Insect Investigations. Pp. 15, figs. 8. Contribution from the Bureau of Entomology. (Farmers' Bulletin 837.)

For general distribution.

Important Pecan Insects and Their Control. By John B. Gill, Entomological Assistant, Deciduous Fruit Insect Investigations. Pp. 48, figs. 58. Contribution from the Bureau of Entomology. (Farmers' Bulletin 843.)

Of interest to all pecan growers.

The Gipsy Moth and the Brown-Tail Moth and their Control. By A. F. Burgess, in Charge of Gipsy Moth and Brown-tail Moth Investigations. Pp. 28, figs. 13. Contribution from the Bureau of Entomology. (Farmers' Bulletin 845.)

For distribution especially in the New England States.

The Tobacco Beetle and How to Prevent Damage by It. By G. A. Runner, Entomological Assistant, Southern Field Crop Insect Investigations. Pp. 22, figs. 6. Contribution from the Bureau of Entomology. (Farmers' Bulletin 846.)

Of interest to tobacco growers, dealers, and manufacturers.

Strawberry Culture in Tennessee, Kentucky, and West Virginia. By George M. Darrow, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 24, figs. 11. (Farmers' Bulletin 854.)

Discusses the different cultural methods used in different sections and is of interest to strawberry growers in the South and Middle West.

Irrigation of Grain. By Walter W. McLaughlin, Irrigation Engineer. Pp. 22, figs. 7. Contribution from the Office of Public Roads and Rural Engineering. (Farmers' Bulletin 863.)

A revision of Farmers' Bulletin 399, and of interest to irrigation farmers.

Practical Information for Beginners in Irrigation. By Samuel Fortier, Chief, Irrigation Investigations. Pp. 38, figs. 23. Contribution from the Office of Public Roads and Rural Engineering. (Farmers' Bulletin 864.)

Is a revision of Farmers' Bulletin 263. Of interest to all irrigation farmers.

Swine Management. By George M. Rommel and F. G. Ashbrook, Animal Husbandry Division. Pp. 38, figs. 15. Contribution from the Bureau of Animal Industry. (Farmers' Bulletin 874.)

A revision of Farmers' Bulletin 205, and suitable for general distribution.

The Rough-Headed Corn Stalk-Beetle in the Southern States and Its Control. By W. J. Phillips and Henry Fox, Entomological Assistants, Cereal and Forage Insect Investigations. Pp. 12, figs. 8. Contribution from the Bureau of Entomology. (Farmers' Bulletin 875.)

For distribution among, and of especial interest to farmers in the Southern States.

Human Food from an Acre of Staple Farm Products. By Morton O. Cooper and W. J. Spillman. Pp. 11. Contribution from the Office of Farm Management. (Farmers' Bulletin 877.)

Gives an acre for acre comparison of the food value of different crops and animal products.

Fumigation of Ornamental Greenhouse Plants with Hydrocyanic-Acid Gas. By E. R. Sasser, Collaborator, and A. D. Borden, Scientific Assistant. Pp. 20, figs. 4. Contribution from the Bureau of Entomology. (Farmers' Bulletin 889.)

Of interest to florists and owners of greenhouses.

Rye Growing in the Southeastern States. By Clyde E. Leighty, Agronomist in Charge of Eastern Wheat and Rye Investigations. Pp. 16. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 894.**)

Suggests the advisability of raising rye in said States and describes the various uses of this crop.

House Rats and Mice. By David E. Lantz, Assistant Biologist. Pp. 23, figs. 10. Contribution from the Bureau of Biological Survey. (**Farmers' Bulletin 896.**)

For general distribution.

The Silverfish, or "Slicker": An Injurious Household Insect. By E. A. Back, Entomologist in Charge of Stored Product Insect Investigations. Pp. 4, fig. 1. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 902.**)

Suitable for general distribution.

Commercial Evaporation and Drying of Fruits. By James H. Beattie and H. P. Gould, Office of Horticultural and Pomological Investigations. Pp. 61, figs. 22. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 903.**)

Of interest generally to all who have surplus in considerable quantity for which there is not ready sale in the fresh state. Though intended primarily to aid in developing commercial activities, the information should be of value to all who wish to dry fruit for home use.

Game Laws for 1917. A summary of the Provisions of Federal, State, and Provincial Statutes. By George A. Lawyer, W. F. Bancroft, and Frank L. Earnshaw, Assistants, Bureau of Biological Survey. Pp. 70. Contribution from the Bureau of Biological Survey. (**Farmers' Bulletin 910.**)

For general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Expansion and Contraction of Concrete and Concrete Roads. By A. T. Goldbeck, Engineer of Tests, and F. H. Jackson, jr., Assistant Testing Engineer. Pp. 31, figs. 19. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Oct. 13, 1917. (**Department Bulletin 532.**) Price, 10 cents.

A technical study of the subject, and of interest to road engineers and contractors.

The Red Spruce: Its Growth and Management. By Louis S. Murphy, Forest Examiner. Pp. 100, pls. 7, fig. 1. Contribution from the Forest Service. (Professional Paper.) Oct. 31, 1917. (**Department Bulletin 544.**) Price, 20 cents.

The purpose of this bulletin is to formulate definite systems of forest management for various conditions.

Important Range Plants, Their Life History and Forage Value. By Arthur W. Sampson, Plant Ecologist, Forest Service. Pp. 63, pls. 56. Contribution from the Forest Service and the Bureau of Plant Industry. (Professional Paper.) Oct. 8, 1917. (**Department Bulletin 545.**) Price, 40 cents.

For use of forest officers and stock owners using the national forests for grazing purposes.

Collection of Weevils and Infested Squares as a Means of Control of the Cotton Boll Weevil in the Mississippi Delta. By B. R. Coad and T. F. McGehee, Entomological Assistants, Southern Field Crop Insect Investigations. Pp. 51, pl. 2, fig. 1. Contribution from the Bureau of Entomology. Oct. 4, 1917. (**Department Bulletin 564.**) Price, 10 cents.

Of interest to entomologists and to cotton growers in the Delta region of Louisiana.

Increased Yield of Turpentine and Rosin from Double Chipping. By A. W. Schorger, Chemist in Forest Products, and R. L. Pettigrew, Assistant Engineer in Forest Products. Pp. 9, pls. 2. Contribution from the Forest Service. (Professional Paper.) Oct. 2, 1917. (**Department Bulletin 567.**) Price, 5 cents.

Describes a method of securing more naval stores from the same tree, and is of interest to all naval-stores operators.

The Recovery of Potash as a By-Product in the Cement Industry. By William H. Ross, Albert R. Merz, and C. R. Wagner. Pp. 23. Contribution from the Bureau of Soils. (Professional Paper.) Oct. 5, 1917. (Department Bulletin 572.) Price, 5 cents.

A discussion of the possibility of recovering potash from waste in cement producing plants, and a description of the various processes used.

Microscopical Studies on Tomato Products. By Burton J. Howard, Microscopist in Charge, in collaboration with Charles H. Stephenson, Scientific Assistant, Microchemical Laboratory. Pp. 24, figs. 5. Contribution from the Bureau of Chemistry. Oct. 6, 1917. (Department Bulletin 581.) Price, 5 cents.

Of interest to canners and manufacturers of tomato products.

The Control of Hog Cholera, With a Discussion of the Results of Field Experiments. By A. D. Melvin, Chief of the Bureau of Animal Industry, and M. Dorset, Chief of the Biochemic Division. Pp. 18, figs. 2. Contribution from the Bureau of Animal Industry. Oct. 13, 1917. (Department Bulletin 584.) Price, 5 cents.

Of interest to officials engaged in combating hog cholera.

A Guide for Formulating a Milk Ordinance. Prepared in the Dairy Division of the Bureau of Animal Industry and the Bureau of Chemistry. Pp. 4. Contribution from the Bureau of Animal Industry and the Bureau of Chemistry. Oct. 18, 1917. (Department Bulletin 585.) Price, 5 cents.

Of interest to town, city, and other officials interested in the improvement of the milk supply.

Winter Wheat in the Great Plains Area, Relation of Cultural Methods to Production. By E. C. Chilcott, Agriculturist in charge, John S. Cole, Agriculturist, and J. B. Kuska, Assistant, Office of Dry-Land Agriculture. Pp. 36. Contribution from the Bureau of Plant Industry. Oct. 11, 1917. (Department Bulletin 595.) Price, 5 cents.

Intended for all who are interested in the agricultural possibilities of the Great Plains area.

MISCELLANEOUS.

Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction During the Period from July 1 to September 30, 1914. [Nos. 38666 to 39308.] Oct. 30, 1917. (Inventory No. 40, Bureau of Plant Industry.) Price, 20 cents.

Life Zone Investigations in Wyoming. By Merritt Cary, Assistant Biologist, Biological Survey. Pp. 95, pls. 15, figs. 17, map. Oct. 3, 1917. (North American Fauna, No. 42.) Price, 40 cents.

Experimental Roads in the Vicinity of Washington, D. C. By B. A. Anderson, Assistant Chemist, and J. T. Pauls, Junior Highway Engineer, Office of Public Roads and Rural Engineering. Pp. 8. Oct. 15, 1917. (Circular 77, Office of Secretary.) Price, 5 cents.

Emergency Fuel from the Farm Woodland. By A. F. Hawes, Extension Specialist. Pp. 8. Contribution from the Forest Service and the States Relations Service. Oct., 1917. (Circular 79, Office of the Secretary.) Price, 5 cents.

Harvesting, Picking, Thrashing, and Storing Peanuts. By H. C. Thompson, Horticulturist, Office of Horticultural and Pomological Investigations, Bureau of Plant Industry. Pp. 6, figs. 4. Oct. 13, 1917. (Circular 81, Office of the Secretary.) Price, 5 cents.

Rules and Regulations of the Secretary of Agriculture Under the Food Products Inspection Law of August 10, 1917. Pp. 8. Oct. 31, 1917. (Circular 82, Office of the Secretary.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 11, No. 1. Oct. 1, 1917. Contents: Natural Reproduction from Seed Stored in the Forest Floor. (jx F-4.) By J. V. Hoffmann.—A New Parasitic Nema, *Tylenchus penetrans*, Found Infesting Cotton and Potatoes. (jy G-121.) By N. A. Cobb. Pp. 1-33, pls. 7, figs. 9. Price, 20 cents.

Same, Vol. 11, No. 2, Oct. 8, 1917. Contents: Endrot of Cranberries. (ka G-122.) By C. L. Shear.—Some Factors Affecting Nitrate-Nitrogen Accumulation in Soil. (kb Kans-10.) By P. L. Gainey and L. F. Metzler. Pp. 35-64, pl. 1, figs. 3. Price, 10 cents.

Same, Vol. 11, No. 3, Oct. 15, 1917. Contents: Conglutination Test for the Diagnosis of Glanders. (kc A-31.) By H. W. Schoening.—Occurrence of Manganese in Insect Flowers and Insect Flower Stems. (kg E-7.) By C. C. McDonnell and R. C. Roark.—Life History of *Macrosiphum illinoisensis*, the Grapevine Aphis. (jz K-57.) By A. C. Baker. Pp. 65-89, pls. 2. Price, 10 cents.

Same, Vol. 11, No. 4, Oct. 22, 1917. Contents: Effect of Sulphur on Different Crops and Soils. (kh Ky.-5.) By O. M. Shedd.—A Statistical Study of Some Indirect Effects of Certain Selections in Breeding Indian Corn. (ke Ill.-6.) By H. L. Rietz and L. H. Smith.—Some Notes on the Direct Determination of the Hygroscopic Coefficient. (ki Minn.-20.) By Frederick J. Alway, Millard A. Kline, and Guy R. McDole.—Inheritance Studies in *Pisum*: IV. Interrelation of the Genetic Factors of *Pisum*. (kd G-123.) By Orland E. White. Pp. 91-190, figs. 24. Price, 20 cents.

Same, Vol. 11, No. 5. Oct. 29, 1917. Contents: Fungus Fairy Rings in Eastern Colorado and Their Effect on Vegetation. (kf G-124.) By H. L. Shantz and R. L. Piemeisel. Pp. 191-245, pls. 21, figs. 13. Price, 20 cents.

Same, Vol. 8, No. 13. Mar. 26, 1917. Contents and Index of Volume 8. Pp. i-xv, 477-482. Price, 10 cents.

Same, Vol. 9, No. 13. June 25, 1917. Contents and Index of Volume 9. Pp. i-x, 427-431. Price, 5 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

Experiment Station Record. Vol. 37, No. 4, September, 1917. E. W. Allen, Ph. D., Editor. Pp. 301-400. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 3, No. 10, October, 1917. Pp. 93-104. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

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Bureau of Animal Industry. No. 124. August, 1917. Pp. 89-97. Oct. 11, 1917. Price, 5 cents.

Bureau of Animal Industry. No. 125. September, 1917. Pp. 99-106. Oct. 29, 1917. Price, 5 cents.

Bureau of Chemistry. Supplement No. 28. [N. J. 4851-4900.] Pp. 479-544. Sept. 25, 1917. Price, 10 cents.

Bureau of Chemistry. Supplement No. 29. [N. J. 4901-4950.] Pp. 545-600. Oct. 17, 1917. Price, 5 cents.

Federal Horticultural Board. No. 43. August, 1917. Pp. 103-109. Oct. 2, 1917. Price, 5 cents.

Insecticide and Fungicide Board. No. 17. Pp. 295-320. Oct. 6, 1917. Price, 5 cents.

Bureau of Markets. No. 25. Pp. 23. Oct. 16, 1917. Price, 25 cents.

Bureau of Markets. No. 26. Pp. 36. Oct. 10, 1917. Price, 5 cents.

Bureau of Markets. No. 27. Pp. 40. Oct. 6, 1917. Price, 5 cents.

Bureau of Markets. No. 28. Pp. 6. Oct. 31, 1917. Price, 5 cents.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Washington County, Alabama. By Lewis A. Hurst, E. H. Stevens, and Howard C. Smith, of the U. S. Department of Agriculture, and J. L. Andress and J. F. Stroud, of the Alabama Department of Agriculture and Industries. Pp. 51, pls. 4, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of the Honey Lake Area, California. By J. E. Guernsey, James Koeber, and C. J. Zinn of the University of California, and E. C. Eckmann, of the U. S. Department of Agriculture. Pp. 64, pls. 4, figs. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of the Pasadena Area, California. By E. C. Eckmann, of the U. S. Department of Agriculture, and C. J. Zinn, of the University of California. Pp. 56, pls. 3, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Crisp County, Georgia. By E. T. Maxon, of the U. S. Department of Agriculture, and David D. Long, of the Georgia State College of Agriculture. Pp. 24, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Benton County, Indiana. By Grove B. Jones, of the U. S. Department of Agriculture, and J. Bayard Brill, of the Indiana Department of Geology. Pp. 20, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Scott County, Iowa. By E. H. Stevens and E. H. Smies, of the U. S. Department of Agriculture, and Knute Espe, of the Iowa Agricultural Experiment Station. Pp. 43, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Dawes County, Nebraska. By R. R. Burn, L. Vincent Davis, and J. M. Snyder, of the U. S. Department of Agriculture, and F. A. Hayes and Thomas E. Kokjer, of the Nebraska Soil Survey. Pp. 41, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Cortland County, New York. By E. T. Maxon, of the U. S. Department of Agriculture, and G. L. Fuller, of the New York State College of Agriculture. Pp. 28, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Columbus County, North Carolina. By R. B. Hardison and R. T. Avon Burke, of the U. S. Department of Agriculture, and L. L. Brinkley and R. C. Journey, of the North Carolina Department of Agriculture. Pp. 42, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Hertford County, North Carolina. By E. S. Vanatta, of the U. S. Department of Agriculture, and F. N. McDowell, of the North Carolina Department of Agriculture. Pp. 35, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Harnett County, North Carolina. By Robert C. Journey, of the U. S. Department of Agriculture, and S. O. Perkins, of the North Carolina Department of Agriculture. Pp. 37, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Soil Survey of Portage County, Wisconsin. By W. J. Geib and L. R. Schoenmann, of the U. S. Department of Agriculture, and Lewis P. Hanson, of the Wisconsin Geological and Natural History Survey. Pp. 52, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

Soil Survey of Wood County, Wisconsin. By W. J. Geib, of the U. S. Department of Agriculture, and Guy Conrey, W. C. Boardman, and Clinton B. Post, of the Wisconsin Geological and Natural History Survey. Pp. 51, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 7. July, 1917. [Sept. 29, 1917.] Pp. 335-395, charts 9, figs. 16. Price, 25 cents a copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Mean annual rainfall of the United States, with notes on the new chart of average annual precipitation. By R. DeC. Ward.—Sea breeze on eastern Long Island. By E. S. Clowes.—Influence of the sea on the climate of Long Island. By E. S. Clowes.—Killing frost and length of growing season in Kentucky. By F. J. Walz.—Relation between temperature and crops. By Dewey A. Seeley.—Damage by hail in Kansas. By S. D. Flora and C. L. Bush.—Scarf clouds. By C. F. Brooks.—Some field experiments on evaporation from snow surfaces. By F. S. Baker.—Dark day in Jamaica.—Distance at which thunder can be heard. By Clarence E. Miller.

National Weather and Crop Bulletin, Nos. 29, 30, 31, October, 1917; reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

JOS. A. ARNOLD,
Chief, Division of Publications.

HOW STATES, COMMUNITIES, AND INDIVIDUALS CAN HELP ELIMINATE RATS AND MICE—MEASURES SUGGESTED BY BIOLOGISTS OF U. S. DEPARTMENT OF AGRICULTURE.



BY REQUIRING that all new buildings, wharves, and other structures be rat proof; that existing buildings of rat-proof construction be further protected by having basement windows and drains covered with screens, gratings, etc.; and that existing buildings that are not rat proof be made so by remodeling.

By constructing sewers and drains so that they will not provide entrance and retreat for rats.

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By threshing and marketing grain early so that stacks will not furnish harboring places and food for rats.

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By protecting the hawks, owls, and other natural enemies of rats which are not so destructive to poultry as rats themselves.

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By keeping provisions which rats and mice will attack in rat-proof and mouse-proof containers.

By destroying rats and mice systematically by poisoning, trapping, and by organized systematic hunts.

By arousing public opinion to the realization of the importance of exterminating rats and mice.

This circular will be sent regularly to all who apply for it.

United States Department of Agriculture

WASHINGTON, D. C., November 30, 1917.

MONTHLY LIST OF PUBLICATIONS.

[NOVEMBER, 1917.]

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Homemade Silos. By Helmer Rabild and K. E. Parks, Dairy Division. Pp. 55, figs. 47. Contribution from the Bureau of Animal Industry. (Farmers' Bulletin 855.)

A revision of Farmers' Bulletin 589 and suitable for general distribution.

Screw-Worms and Other Maggots Affecting Animals. By F. C. Bishopp, Entomologist, and J. D. Mitchell and D. C. Parman, Entomological Assistants, Southern Field-Crop Insect investigations. Pp. 20, figs. 8. Contribution from the Bureau of Entomology. (Farmers' Bulletin 857.)

Of especial interest to stock raisers of the Southwest.

The Use of Windmills in Irrigation in the Semiarid West. By P. E. Fuller, Irrigation Engineer. Pp. 38, figs. 11. Contribution from the Office of Public Roads and Bureau Engineering. (Farmers' Bulletin 866.)

A revision of Farmers' Bulletin 394 and of interest to irrigation farmers.

The Muskrat as a Fur Bearer, with Notes on Its Use as Food. By David E. Lantz, Assistant Biologist. Pp. 23, figs. 4. Contribution from the Bureau of Biological Survey. (Farmers' Bulletin 869.)

A revision of Farmers' Bulletin 396 and suitable for general distribution.

✓ **Grains for Western North and South Dakota.** By F. Ray Babcock, John H. Martin, and Ralph W. Smith, Scientific Assistants in Cereal Investigations. Pp. 22, figs. 9. Contribution from the Bureau of Plant Industry. (Farmers' Bulletin 878.)

Of interest to farmers in the west half of North and South Dakota and the east fourth of Montana.

✓ **Irrigation of Orchards.** By Samuel Fortier, Chief of Irrigation Investigations. Pp. 40, figs. 30. Contribution from the Office of Public Roads and Rural Engineering. (Farmers' Bulletin 882.)

A revision of Farmers' Bulletin 404, and of interest to fruit growers on irrigated lands.

✓ **Grains for the Utah Dry Lands.** By Jenkin W. Jones, Scientific Assistant, Office of Cereal Investigations, and Aaron F. Bracken, Assistant Agronomist, Utah Agricultural College. Pp. 22, figs. 8. Contribution from the Bureau of Plant Industry. (Farmers' Bulletin 883.)

For farmers and settlers in the dry lands of Utah.

✓ **Fleas and Their Control.** By F. C. Bishopp, Entomologist, Insects Affecting the Health of Animals. Pp. 15, figs. 5. Contribution from the Bureau of Entomology. (Farmers' Bulletin 897.)

A revision of Farmers' Bulletin 683, and suitable for general distribution.

✓ **Laws Relating to Fur-Bearing Animals, 1917.** A Summary of Laws in the United States and Canada Relating to Trapping, Open Seasons, Propagation, and Bounties. By David E. Lantz, Assistant Biologist. Pp. 32. Contribution from the Bureau of Biological Survey. (Farmers' Bulletin 911.)

For general distribution.

✓ **The Application of Dockage in the Marketing of Wheat.** Pp. 12, fig. 1. Contribution from the Bureau of Markets. (Farmers' Bulletin 919.)

This bulletin explains to grain farmers and dealers, the method of determining dockage and its relation to the marketing of wheat under the United States grains standard Act.

DEPARTMENTAL BULLETINS—TECHNICAL.

✓ The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

✓ **Maple Sugar: Composition, Methods of Analysis, Effect of Environment.** By A. Hugh Bryan, formerly Chief, Sugar Laboratory, in Collaboration with M. N. Straughn, C. G. Church, A. Given, and S. F. Sherwood, Assistant Chemists. Pp. 46, figs. 2. Contribution from the Bureau of Chemistry. (Professional Paper.) Nov. 3, 1917. (Department Bulletin 466.) Price, 5 cents.

Of interest to manufacturers of and dealers in maple sugar.

✓ **Standard Forms for Specifications, Tests, Reports, and Methods of Sampling for Road Materials,** as recommended by the First Conference of State Highway Testing Engineers and Chemists, Washington, D. C., Feb. 12 to 17, 1917. Pp. 56, fig. 1. Contribution from the Office of Public Roads and Rural Engineering. Nov. 26, 1917. (Department Bulletin 555.) Price, 10 cents.

Of interest to Engineers, Chemists, and Road Contractors generally.

✓ **Increased Cattle Production on Southwestern Ranges.** By James T. Jardine, Inspector of Grazing, and L. C. Hurtt, Grazing Examiner. Pp. 32, pls. 12, figs. 2. Contribution from the Forest Service. Nov. 15, 1917. (Department Bulletin 588.) Price, 15 cents.

Gives results of experiments which bear directly on the problem of how to produce more and better cattle on western range lands.

✓ **Courses in Secondary Agriculture for Southern Schools. (Third and Fourth Years.)** By M. P. Barrows, Specialist in Agricultural Education. Pp. 40. Contribution from the States Relations Service. (Professional Paper.) Nov. 5, 1917. (Department Bulletin 592.) Price, 5 cents.

For use of teachers in southern schools.

✓ **The Sweet-Potato Leaf-Folder.** By Thos. H. Jones, Entomological Assistant, Truck-Crop Insect Investigations. Pp. 12, figs. 4. Contribution from the Bureau of Entomology. (Professional Paper.) Nov. 22, 1917. (Department Bulletin 609.) Price, 5 cents.

Report on spraying experiments for its control in southern Texas by M. M. High, and at Baton Rouge, La., by the author.

The Economical Winter Feeding of Beef Cows in the Corn Belt. By J. S. Cotton, Office of Farm Management, and Edmund H. Thompson, Scientific Assistant, Bureau of Animal Industry. Pp. 16, fig. 1. Contribution from the Office of Farm Management and the Bureau of Animal Industry. Nov. 15, 1917. (Department Bulletin 615.) Price, 5 cents.

Of interest to farmers and stock raisers in the corn belt.

The Utilization of Waste Tomato Seeds and Skins. By Frank Rabak, Chemical Biologist, Drug-Plant and Poisonous-Plant Investigations. Pp. 15. Contribution from the Bureau of Plant Industry. (Professional Paper.) Nov. 30, 1917. Department Bulletin 632.) Price, 5 cents.

Of interest to manufacturers of tomato products.

MISCELLANEOUS.

✓ **Swine-Judging Suggestions for Pig-Club Members.** By J. D. McVean and F. G. Ashbrook, of the Animal Husbandry Division. Pp. 14, figs. 4. Contribution from the Bureau of Animal Industry. November, 1917. (Circular 83, Office of the Secretary.) Price, 5 cents.

Intended mainly for beginners in the study of hog judging, and members of boys' and girls' pig clubs.

The Work of the Umatilla Reclamation Project Experiment Farm in 1915 and 1916. By R. W. Allen, Farm Superintendent. Pp. 39, figs. 3. Nov. 24, 1917. (W. A. I. 17. Bureau of Plant Industry.) Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 11, No. 6. Nov. 5, 1917. Contents: Run-Off from the Drained Prairie Lands of Southern Louisiana. (kk D-14.) By Charles W. Okey.—Diagnosing White-Pine Blister-Rust from Its Mycelium. (km G-125.) By Reginald H. Colley. Pp. 247-286, pl. 1, figs. 6. Price, 15 cents.

✓ **Same, Vol. 11, No. 7.** Nov. 12, 1917. Contents: Effect of Temperature Aeration and Humidity on Jonathan-Spot and Scald of Apples in Storage. (kn G-126.) By Charles Brooks and J. S. Cooley.—Studies in Greenhouse Fumigation with Hydrocyanic Acid: Physiological Effects on the Plant. (kl Minn-21.) By William Moore and J. J. Willaman.—Effect of Pumping from a Shallow Well on the Ground-Water Table. (kj Cal.-11.) By Walter W. Weir. Pp. 287-357, pls. 3, figs. 50. Price, 25 cents.

✓ **Same, Vol. 11, No. 8.** Nov. 19, 1917. Contents: Reactions of the Phosphorus of the Thickened Root of the Flat Turnip (ko, R. I.-1). By Burt L. Hartwell, F. S. Hammett, and P. H. Wessels.—Three-Lined Fig-Tree Borer (kp, K-58). By J. R. Horton.—A Statistical Study of Body Weights, Gains, and Measurements of Steers During the Fattening Period (kq, Pa.-3). By B. O. Severson and Paul Gerlaugh.—Life History of *Ascaris lumbricoides* and Related Forms (ky, A-32). By B. H. Ransom and W. D. Foster. Pp. 359-398, pls. 5. Price, 15 cents.

✓ **Same, Vol. 11, No. 9.** Nov. 26, 1917. Contents: Experiments in Field Technic in Rod Row Tests. (kr Minn.-22.) By H. K. Hayes and A. C. Army.—Hydrocyanic-Acid Gas as a Soil Fumigant. (ku Cal.-12.) By E. Ralph de Ong.—Enzymes of Milk and Butter. (kt Minn.-23.) By R. W. Thatcher and A. C. Dahlberg. Pp. 399-450, pl. 1, fig. 1. Price, 15 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

✓ **Experiment Station Record.** Vol. 37, No. 5, October, 1917. E. W. Allen, Ph. D., Editor. Pp. 401-500. Price, 15 cents.

Same. Vol. 36, Index Number. Pp. i-xxv, 901-987. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

The Monthly Crop Report. Vol. 3, No. 11, November, 1917. Pp. 105-116. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yields, prices, and value of crops and live stock. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

Bureau of Chemistry. No. 21. Pp. 67-80. Nov. 12, 1917. Price, 5 cents.

Federal Horticultural Board. No. 44. September, 1917. Pp. 111-118. Nov. 3, 1917. Price, 5 cents.

Insecticide and Fungicide Board. No. 18. Pp. 321-327. Nov. 30, 1917. Price, 5 cents.

Bureau of Markets. No. 29. Pp. 5. Nov. 17, 1917. Price, 5 cents.

SOIL SURVEYS.

All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of San Saba County, Texas. By J. O. Veatch, R. F. Rogers, M. W. Beck, and H. G. Lewis. Pp. 66, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

Reconnaissance Soil Survey of South Part of North-Central Wisconsin. By W. J. Geib, Arthur E. Taylor, J. B. R. Dickey, and Carl Thompson, of the U. S. Department of Agriculture, and T. J. Dunnewald and Clinton B. Post, of the Wisconsin Geological and Natural History Survey. Pp. 65, pls. 4, figs. 2, map. (From F. O. Soils, 1915.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 45, No. 8. August, 1917. [Nov. 3, 1917.] Pp. 397-438, charts 9, figs. 6. Price, 25 cents a copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation during August, 1917. By H. H. Kimball.—Aurora of August 21, 1917. By D. F. Manning.—Aurora of August 25, 1917, at Washington, D. C. By I. F. Hand; C. Abbe, jr.—Magnetic storm of August 26-27, 1916. By W. E. W. Jackson.—Comparison of Callendar sunshine recorder and Angstrom pyrheliometer. By J. Patterson.—Penetrating radiation in the atmosphere. By G. C. Simpson.—Notes on the hot wave in southern California, June 14-17, 1917. By Ford A. Carpenter.—The Weather Bureau and the War.

Daily River Stages at River Gage Stations on the Principal Rivers of the United States. Vol. 14, for the year 1916. By Alfred J. Henry, Professor of Meteorology. Pp. 278. Price, 50 cents.

Climatological Data for the United States by Sections. Vol. 4, No. 7. July, 1917. Price, 35 cents.

Same. Vol. 4, No. 8. August, 1917. Price, 35 cents.

National Weather and Crop Bulletin, No. 32. November, 1917; reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

JOS. A. ARNOLD,
Chief, Division of Publications.

Checked Jan. 17, 1918
P96 M
JAN 16 1918
This circular will be sent regularly to all who apply for it.

United States Department of Agriculture,

WASHINGTON, D. C., December 31, 1917.

MONTHLY LIST OF PUBLICATIONS.

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FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

NOTE.—The department's supply of the current numbers of Farmers' Bulletin is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy unless otherwise noted.

✓ **Control of Diseases and Insect Enemies of the Home Vegetable Garden.** By W. A. Orton, Pathologist in Charge of Cotton, Truck, and Forage Crop Disease Investigations, Bureau of Plant Industry, and F. H. Chittenden, Entomologist in Charge of Truck Crop Insect Investigations, Bureau of Entomology. Pp. 72, figs. 82. Contribution from the Bureau of Plant Industry and the Bureau of Entomology. (**Farmers' Bulletin 856.**) Price, 10 cents.
Suitable for general distribution.

✓ **The Community Fair.** By J. Sterling Moran, Field Assistant in Rural Organization. Pp. 11, figs. 7. Contribution from the Bureau of Markets. (**Farmers' Bulletin 870.**)

Suggests methods of organization of and manner of holding community fairs.

✓ **The Bollworm or Corn Earworm.** By F. C. Bishopp, Entomologist, Insects Affecting the Health of Animals. Pp. 16, figs. 7. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 872.**)

For general distribution.

✓ **Raspberry Culture.** By George M. Darrow, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 45, figs. 33. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 887.**)

Suitable for general distribution.

✓ **Back-Yard Poultry Keeping.** By Rob R. Slocum, Animal Husbandry Division. Pp. 22, figs. 13. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 889.**)

For general distribution.

✓ **How Insects Affect the Cotton Plant and Means of Combating Them.** By W. Dwight Pierce, Entomologist, Southern Field Crop Insect Investigations. Pp. 28, figs. 36. Contribution from the Bureau of Entomology. (**Farmers' Bulletin 890.**)

Describes the work of many insects and gives suggestions for their control.

✓ **Spring Oat Production.** By C. W. Warburton, Agronomist in Charge of Oat Investigations. Pp. 23, figs. 9. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 892.**)

A revision of Farmers' Bulletin 424, and suitable for general distribution.

✓ **Breeds of Dairy Cattle.** By H. P. Davis, Dairy Husbandman, Dairy Division. Pp. 35, figs. 19. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 893.**)

For general distribution.

✓ **Everbearing Strawberries.** By George M. Darrow, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 20, figs. 7. Contribution from the Bureau of Plant Industry. (**Farmers' Bulletin 901.**)

Suitable for general distribution.

- ✓ **The Self-Feeder for Hogs.** By F. G. Ashbrook and R. E. Gongwer, Animal Husbandry Division. Pp. 12, figs. 8. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 906.**)
For general distribution.
- ✓ **Bean Growing in Eastern Washington and Oregon and Northern Idaho.** By Lee W. Fluharty, Assistant Agriculturist, revised by Byron Hunter, Agriculturist. Pp. 16, figs. 3. Contribution from the Office of Farm Management. (**Farmers' Bulletin 907.**)
A revision of Farmers' Bulletin 561, and of interest to farmers in section mentioned.
- ✓ **Killing Hogs and Curing Pork.** By F. G. Ashbrook and G. A. Anthony, Animal Husbandry Division. Pp. 40, figs. 39. Contribution from the Bureau of Animal Industry. (**Farmers' Bulletin 913.**)
Suitable for general distribution.

DEPARTMENTAL BULLETINS—TECHNICAL.

The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

- ✓ **Effects of Grazing Upon Western Yellow-Pine Reproduction in the National Forests of Arizona and New Mexico.** By Robert R. Hill, Grazing Examiner. Pp. 27, pls. 3, figs. 2. Contribution from the Forest Service. (Professional Paper.) Dec. 21, 1917. (**Department Bulletin 580.**) Price 10 cents.
This bulletin presents the results of a study to determine the character and extent of the damage to young growth of western yellow pine in the Southwest from the grazing of live stock, and to find out the best means of keeping such damage at a minimum while permitting proper utilization of the range.
- ✓ **Manufacturing Tests of the Official Cotton Standards for Grade.** By William S. Dean, Assistant in Cotton Testing, and Fred Taylor, Cotton Technologist. Pp. 27, figs. 11. Contribution from the Bureau of Markets. (Professional Paper.) Dec. 26, 1917. (**Department Bulletin 591.**) Price, 5 cents.
This bulletin should be of interest to cotton producers, manufacturers, and dealers.
- ✓ **Judging Sheep as a Subject of Instruction in Secondary Schools.** By H. P. Barrows, Specialist in Agricultural Education. Pp. 31, figs. 23. Contribution from the States Relations Service. (Professional Paper.) Dec. 20, 1917. (**Department Bulletin 593.**) Price, 10 cents.
This bulletin is intended for the use of teachers of secondary agriculture.
- ✓ **Feeding Dried Pressed Potatoes to Swine.** By Frank G. Ashbrook, Junior Animal Husbandman in Swine Feeding and Breeding, and R. E. Gongwer, Scientific Assistant in Swine Investigations, Animal Husbandry Division. Pp. 11, pls. 2. Contribution from the Bureau of Animal Industry. (Professional Paper.) Dec. 13, 1917. (**Department Bulletin 596.**) Price, 5 cents.
Shows results of feeding dried pressed potatoes as compared with other feeds and proves this to be a profitable way in which to dispose of surplus potatoes.
- ✓ **The Relation of Some of the Rarer Elements in Soils and Plants.** By W. O. Robinson, L. A. Steinkoenig, and C. F. Miller, Scientists in Chemical Investigations. Pp. 27, figs. 3. Contribution from the Bureau of Soils. (Professional Paper.) Dec. 10, 1917. (**Department Bulletin 600.**) Price, 5 cents.
A description of samples used and analytical results obtained in certain investigations on the subject. Of interest to chemists generally.
- ✓ **The Handling and Precooling of Florida Lettuce and Celery.** By H. J. Ramsey, Pomologist in Charge of Fruit and Vegetable Handling and Storage Investigations, and E. L. Markell, Scientific Assistant, Office of Horticultural and Pomological Investigations. Pp. 29, figs. 19. Contribution from the Bureau of Plant Industry and Bureau of Markets. Dec. 21, 1917. (**Department Bulletin 601.**) Price, 10 cents.
Of special interest to growers and shippers of lettuce and celery in the Gulf States, and to receivers of same.
- ✓ **Fish Meal as a Feed for Swine.** By Frank G. Ashbrook, Junior Animal Husbandman, Animal Husbandry Division. Pp. 10. Contribution from the Bureau of Animal Industry. Dec. 7, 1917. (**Department Bulletin 610.**) Price, 5 cents.
Of interest to stock raisers generally.
- ✓ **Walnut Blight in the Eastern United States.** By S. M. McMurran, Assistant Pathologist, Office of Fruit-Disease Investigations. Pp. 8, pls. 2. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 10, 1917. (**Department Bulletin 611.**) Price, 5 cents.
Is intended particularly for all engaged in propagating Persian walnuts in those portions of the United States east of the Rocky Mountains. It is also of scientific interest to plant pathologists.

MISCELLANEOUS.

- ✓ **Disposal of City Garbage by Feeding to Hogs.** By F. G. Ashbrook and J. D. Bebout, Animal Husbandry Division. Pp. 8, fig. 1. Contribution from the Bureau of Animal Industry, December, 1917. (**Circular 80, Office of the Secretary.**) Price, 5 cents.
- ✓ **The Work of the San Antonio Experiment Farm in 1916.** By C. R. Letteer, Farm Superintendent. Pp. 23, figs. 4. Nov. 23, 1917. (**W. A. I. 16, Bureau of Plant Industry.**) Price, 5 cents.

REPORTS.

- ✓ Report of the Secretary of Agriculture for 1917. Pp. 46.
- ✓ Report of the Chief of the Bureau of Animal Industry, 1917. Pp. 63.
- ✓ Report of the Chief of the Bureau of Biological Survey, 1917. Pp. 16.
- ✓ Report of the Chemist, 1917. Pp. 20.
- ✓ Report of the Chief of the Bureau of Crop Estimates, 1917. Pp. 13. *also 1916?*
- ✓ Report of the Entomologist, 1917. Pp. 24.
- ✓ Report of the Federal Horticultural Board, 1917. Pp. 16.
- ✓ Report of the Forester, 1917. Pp. 36.
- ✓ Report of the Insecticide and Fungicide Board, 1917. Pp. 4. *also 1916?*
- ✓ Report of the Librarian, 1917. Pp. 13.
- ✓ Report of the Chief of the Bureau of Markets, 1917. Pp. 42.
- ✓ Report of the Chief of the Bureau of Plant Industry, 1917. Pp. 32.
- ✓ Report of the Chief of the Division of Publications, 1917. Pp. 24.
- ✓ Report of the Director of the Office of Public Roads, 1917. Pp. 22.
- ✓ Report of the Chief of the Bureau of Soils, 1917. Pp. 8.
- ✓ Report of the Solicitor, 1917. Pp. 29.
- ✓ Report of the Director of the States Relations Service, 1917. Pp. 35.
- ✓ Report of the Chief of the Weather Bureau, 1917. Pp. 19.

SERIALS.

✓ **Journal of Agricultural Research.** (For sale only.) Vol. 11, No. 10, Dec. 3, 1917. Contents: Influence of the Degree of Fatness of Cattle Upon Their Utilization of Feed. (kw Pa.-4.) By Henry Prentiss Armsby and J. August Fries.—Podblight of the Lima Bean Caused by *Diaporthe phaseolorum*. (kx G-128.) By L. L. Harter.—Tests of a Large-Sized Reinforced-Concrete Slab Subjected to Eccentric Concentrated Loads. (ks D-15.) By A. T. Goldbeck and H. S. Fairbank.—Temperatures of the Cranberry Regions of the United States in Relation to the Growth of Certain Fungi. (kv G-127.) By Neil E. Stevens. Pp. 451-529, pls. 3, figs. 26. Price, 20 cents.

✓ **Same.** Vol. 11, No. 11, Dec. 10, 1917. Contents: Movement of Soluble Salts Through Soils. (1a Mich.-6.) By M. M. McCool and L. C. Wheating.—Breeding Sweet Corn Resistant to the Corn Earworm. (1c G-129.) By G. N. Collins and J. H. Kempton.—Flaxwilt: A Study of the Nature and Inheritance of Wilt Resistance. (1b Wis. No.-8.) By W. H. Tisdale.—Nature and Rate of Growth in Lambs During the First Year. (kz N. H.-4.) By E. G. Ritzman. Pp. 531-624, pls. 3, figs. 13. Price, 25 cents.

✓ **Same.** Vol. 11, No. 12, Dec. 7, 1917. Contents: Bacterial-Blight of Barley. (1d Wis.-9.) By L. R. Jones, A. G. Johnson, and C. S. Reddy.—Influence of the Age of the Cow on the Composition and Properties of Milk and Milk Fat. (1e Mo.-4.) By C. H. Eckles and L. S. Palmer.—Soil Acidity and the Hydrolytic Ratio in Soils. (1f Mich.-7.) By C. H. Spurway. Pp. 625-672, pls. 4, figs. 5. Price, 20 cents.

NOTE.—Beginning with volume 5 the Journal of Agricultural Research has been issued weekly and is distributed free *only* to the libraries of agricultural colleges and experiment stations, to large universities, technical schools, and such institutions as make suitable exchanges with the department. *It will not be sent free to individuals.* The Superintendent of Documents will receive subscriptions for this publication, the price being \$3 per year, 52 numbers.

✓ **Experiment Station Record.** Vol. 37, No. 6, Abstract Number. E. W. Allen, Ph. D., Editor. Pp. 501-600. Price, 15 cents.

NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, 10 numbers each, at \$1 a volume.

✓ **The Monthly Crop Report.** Vol. 3, No. 12. December, 1917. Pp. 117-136. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock, and the crop summary for 1917. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only*, at prices noted.

✓ **Bureau of Animal Industry.** No. 126. October, 1917. Pp. 107-115. Dec. 20, 1917. Price, 5 cents.

✓ **Bureau of Biological Survey.** No. 17. Pp. 1. Dec. 10, 1917. Price, 5 cents.

✓ **Federal Horticultural Board.** No. 45, October, 1917. Pp. 119-134. Dec. 28, 1917. Price, 5 cents.

SOIL SURVEYS.

☞ All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

✓ **Soil Survey of Pickens County, Alabama.** By A. M. O'Neal, jr., J. L. Andress, and J. M. Moore, of the Alabama Department of Agriculture and Industries, and E. H. Stevens, of the U. S. Department of Agriculture. Pp. 41, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

✓ **Soil Survey of Craighead County, Arkansas.** By E. B. Deeter and L. Vincent Davis. Pp. 32, pl. 1, fig. 1, map. (From F. O. Soils, 1916.) Price, 15 cents.

✓ **Soil Survey of the Riverside Area, California.** By J. W. Nelson and R. L. Pendleton, of the University of California, and J. E. Dunn, A. T. Strahorn, and E. B. Watson, of the U. S. Department of Agriculture. Pp. 88, pls. 4, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

✓ **Soil Survey of Bottineau County, North Dakota.** By W. B. Cobb, W. I. Watkins, and A. T. Strahorn, of the U. S. Department of Agriculture, and Murray E. Stebbins, Melvin Thomas, and A. C. Anderson, of the North Dakota Agricultural Experiment Station. Pp. 54, fig. 1, map. (From F. O. Soils, 1915.) Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

☞ Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

✓ **Monthly Weather Review.** (For sale only.) Vol. 45, No. 9. September, 1917. [Dec. 3, 1917.] Pp. 439-479, charts 9, figs. 9. Price, 25 cents per copy, \$2.50 per year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation during September, 1917. By I. F. Hand.—Döppler's principle for a windy atmosphere. By H. Bateman.—Propagation to great distances of the sound of cannonade at the front. By G. Bigourdan.—Acoustic efficiency of fog-signal machinery. By L. V. King.—Surface currents of Jupiter. By S. Bolton.—Effect of terrestrial relief on ionic densities in the atmosphere. By P. L. Mercanton.—Observations of atmospheric electricity during the total solar eclipse on October 10, 1912, at Boa Vista, Brazil. By W. Knoche and J. Laub.—Release of radium emanation from water at different temperatures. By J. Moran.—Absorption bands of atmospheric ozone in the spectra of sun and stars. By A. Fowler and Hon. A. J. Strutt.—Rainfall and gunfire. By A. Angot.

✓ **National Weather and Crop Bulletin,** No. 33, December, 1917; reporting temperature, rainfall, and crop conditions throughout the United States. Issued weekly, on Wednesday, April to October; monthly remainder of year. Price, 25 cents a year.

✓ **Snow and Ice Bulletins** for December 4, 11, 18, 26, 1917. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,

Chief, Division of Publications.